

# **Natural Gas Monthly**

## **December 1997**

**Energy Information Administration**  
Office of Oil and Gas  
U.S. Department of Energy  
Washington, DC 20585

This report was prepared by the Energy Information Administration, the independent statistical and analytical agency within the Department of Energy. The information contained herein should be attributed to the Energy Information Administration and should not be construed as advocating or reflecting any policy position of the Department of Energy or any other organization.

## **Electronic Publishing System (EPUB) User Instructions**

EPUB is an electronic publishing system maintained by the Energy Information Administration of the U.S. Department of Energy. EPUB allows the general public to electronically access selected energy data from many of EIA's statistical reports. The system is a menu-driven, bulletin board type system with extensive online help capabilities that can be accessed free of charge 24 hours a day by using a terminal or PC with an asynchronous modem. (EPUB will be taken down briefly at midnight for backup.)

### **CONFIGURING YOUR PC SOFTWARE**

PC users must provide the following information to their communications software in order to successfully access the EPUB system. Consult your communications software documentation for information on how to correctly configure your software.

Communication Parameters:

BAUD RATE: 300 - 2400 bps

DATA BITS: 8

STOP BITS: 1

PARITY: NONE

DUPLEX: FULL

TERMINAL TYPE: *examples:* ANSI, ANSI-BBS, VT100

### **ACCESS PHONE NUMBER**

Once your communications software and/or hardware has been configured, you can access EPUB by dialing (202) 586-2557.

### **USING EPUB**

When a connection to the system has been made, some users may find that the menu-driven instructions and the online help capabilities will provide enough information to effectively use EPUB. If needed, more extensive information may be found in the *EPUB Users Guide*, which is available online from the EPUB system or from:

National Energy Information Center, EI-231

Energy Information Administration

Forrestal Building, Room 1F-048

Washington, DC 20585

(202) 586-8800

Hours: 9:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday

Telecommunications device for the hearing-impaired only:

(202)586-1181. Hours 9:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday.

### **EPUB ASSISTANCE:**

For communications or technical assistance, call (202) 586-8959, 8:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday.

For questions about the content of EPUB reports, call (202) 586-8800, 8:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday.

### **EPUB PROVIDES SELECTED DATA FROM THE FOLLOWING EIA PUBLICATIONS:**

Heating fuel data, (April through September) updated the 2nd week of the month

Oxygenate data, updated approximately 15 working days after the end of the report month

*Weekly Petroleum Status Report*, updated on Wednesdays (Thursday in event of a holiday) at 9:00 a.m.

*Petroleum Supply Monthly*, updated on the 20th of the month

*Petroleum Marketing Monthly*, updated on the 20th of the month

*Winter Fuels Report*, propane inventory data updated Wednesdays at 5:00 p.m. All other data updated on Thursdays (Friday in event of a holiday) at 5:00 p.m. (October through March)

*Natural Gas Monthly*, updated on the 20th of the month

*Weekly Coal Production*, updated on Fridays at 5:00 p.m.

*Quarterly Coal Report*, updated 60 days after the end of the quarter

*Electric Power Monthly*, updated on the 1st of the month

*Monthly Energy Review*, updated the last week of the month

*Short Term Energy Outlook*, updated 60 days after the end of the quarter

## Preface

The *Natural Gas Monthly (NGM)* is prepared in the Natural Gas Division, Office of Oil and Gas, Energy Information Administration (EIA), U.S. Department of Energy (DOE), under the direction of Joan E. Heinkel.

General questions and comments regarding the *NGM* may be referred to Ann M. Ducca (202) 586-6137. Specific technical questions may be referred to the appropriate persons listed in Appendix E.

The *NGM* highlights activities, events, and analyses of interest to public and private sector organizations associated with the natural gas industry. Volume and price data are presented each month for natural gas production, distribution, consumption, and interstate pipeline activities. Producer-related activities and underground storage data are also reported. From time to time, the *NGM* features articles designed to assist readers in using and interpreting natural gas information.

The data in this publication are collected on surveys conducted by the EIA to fulfill its responsibilities for gathering and reporting energy data. Some of the data are collected under the authority of the Federal Energy Regulatory Commission (FERC), an independent commission within the DOE, which has jurisdiction primarily in the regulation of electric utilities and the interstate natural gas industry. Geographic coverage is the 50 States and the District of Columbia.

Explanatory Notes supplement the information found in tables of the report. A description of the data collection surveys that support the *NGM* is provided in the Data Sources section. A glossary of the terms used in this report is also provided to assist readers in understanding the data presented in this publication.

All natural gas volumes are reported at a pressure base of 14.73 pounds per square inch absolute (psia) and at 60 degrees Fahrenheit. Cubic feet are converted to cubic meters by applying a factor of 0.02831685.

## Common Abbreviations Used in the Natural Gas Monthly

AGA	American Gas Association	IOGCC	Interstate Oil and Gas Compact Commission
Bbl	Barrels	LNG	Liquefied Natural Gas
BLS	Bureau of Labor Statistics, U.S. Department of Labor	Mcf	Thousand Cubic Feet
Bcf	Billion Cubic Feet	MMBtu	Million British Thermal Units
BOM	Bureau of Mines, U.S. Department of the Interior	MMcf	Million Cubic Feet
Btu	British Thermal Unit	MMS	United States Minerals Management Service, U.S. Department of the Interior
DOE	U.S. Department of Energy	NGL	Natural Gas Liquids
DOI	U.S. Department of the Interior	OCS	Outer Continental Shelf
EIA	Energy Information Administration, U.S. Department of Energy	STIFS	Short-Term Integrated Forecasting System
FERC	Federal Energy Regulatory Commission	STEO	Short Term Energy Outlook
		Tcf	Trillion Cubic Feet

# Contents

	<b>Page</b>
<b>Recent Trends in Natural Gas Spot Prices</b> . . . . .	vii
<b>Highlights</b> . . . . .	1
<b>Appendices</b>	
A. Explanatory Notes . . . . .	73
B. Data Sources . . . . .	79
C. Statistical Considerations . . . . .	85
D. Natural Gas Reports and Feature Articles . . . . .	91
E. Technical Contacts . . . . .	95
F. Natural Gas Electronic Products . . . . .	97
<b>Glossary</b> . . . . .	101

## Tables

	<b>Page</b>
1. Summary of Natural Gas Production in the United States, 1991-1997 . . . . .	7
2. Supply and Disposition of Dry Natural Gas in the United States, 1991-1997 . . . . .	8
3. Natural Gas Consumption in the United States, 1991-1997 . . . . .	10
4. Selected National Average Natural Gas Prices, 1991-1997 . . . . .	12
5. U.S. Natural Gas Imports, by Country, 1991-1997 . . . . .	14
6. U.S. Natural Gas Exports, by Country, 1991-1997 . . . . .	15
7. Marketed Production of Natural Gas, by State, 1991-1997 . . . . .	16
8. Gross Withdrawals and Marketed Production of Natural Gas by State, August 1997 . . . . .	19
9. Underground Natural Gas Storage - All Operators, 1991-1997 . . . . .	20
10. Underground Natural Gas Storage - Interstate Operators of Storage Fields, 1991-1997 . . . . .	22
11. Underground Natural Gas Storage - Intrastate Operators and Independent Producers, 1991-1997 . . . . .	23
12. Net Withdrawals from Underground Storage, by State, 1995-1997 . . . . .	24
13. Activities of Underground Natural Gas Storage Operators, by State, October 1997 . . . . .	28
14. Natural Gas Deliveries to Residential Consumers, by State, 1995-1997 . . . . .	29
15. Natural Gas Deliveries to Commercial Consumers, by State, 1995-1997 . . . . .	33
16. Natural Gas Deliveries to Industrial Consumers, by State, 1995-1997 . . . . .	37
17. Natural Gas Deliveries to Electric Utility Consumers, by State, 1995-1997 . . . . .	41
18. Natural Gas Deliveries to All Consumers, by State, 1995-1997 . . . . .	45
19. Average City Gate Price, by State, 1995-1997 . . . . .	49
20. Average Price of Natural Gas Delivered to Residential Consumers, by State, 1995-1997 . . . . .	52
21. Average Price of Natural Gas Sold to Commercial Consumers, by State, 1995-1997 . . . . .	55
22. Average Price of Natural Gas Sold to Industrial Consumers, by State, 1995-1997 . . . . .	58
23. Average Price of Natural Gas Delivered to Electric Utility Consumers, by State, 1995-1997 . . . . .	61

24.	Percentage of Total Deliveries Represented by Onsystem Sales, by State, 1995-1997 . . . . .	64
25.	Gas Home-Customer-Weighted Heating Degree Days . . . . .	71
A1.	Methodology for Reporting Initial Monthly Natural Gas Supply and Disposition Data . . . . .	73
C1.	Standard Error for Natural Gas Deliveries and Price to Consumers by State, September 1997 . . . . .	90

## Illustrations

	Page
1. Production and Consumption of Natural Gas in the United States, 1994-1998 . . . . .	9
2. Natural Gas Deliveries to Consumers in the United States, 1993-1997 . . . . .	11
3. Average Price of Natural Gas Delivered to Consumers in the United States, 1993-1997 . . . . .	13
4. Average Price of Natural Gas in the United States, 1993-1997 . . . . .	13
5. Underground Natural Gas Storage in the United States, 1993-1997 . . . . .	21
6. Percentage of Total Deliveries Represented by Onsystem Sales, 1993-1997 . . . . .	70

# Recent Trends in Natural Gas Spot Prices

John Herbert, James Thompson, and James Todaro

The unique conditions of one winter versus another have resulted in sharply different natural gas price patterns during the past three heating seasons. Weekly spot prices at the Henry Hub in November, December, and January have differed markedly between years with no discernible pattern. Perhaps the only common facet of prices in these months over the past several years has been their increased volatility compared with prices during the rest of the year. Further, wintertime price volatility is such that prices this January could vary from year-earlier levels by as much as \$1.00 per million Btu (MMBtu). Based on recent trends in natural gas supply and consumption and current weather forecasts, however, it is likely that spot prices at the Henry Hub during January 1998 will be less than during the previous January, perhaps by as much as \$0.40 per MMBtu.

This article focuses primarily on conditions and developments in the East Consuming Region and their connection to prices at the Henry Hub in the Producing Region.<sup>1</sup> The East Consuming Region is characterized by high gas consumption, particularly in the residential and commercial sectors, with much of the gas supplied from the Producing Region (although a fair amount is also imported from Canada). The Henry Hub in southern Louisiana is a major market center with interconnections for many of the pipelines that transport U.S.-produced gas to the eastern consuming States. Further, it is the preferred reference point for prices for most of the domestic gas destined for the East. Therefore, market conditions and developments in the East Consuming Region and price movements and trends at the Henry Hub are usually highly correlated.

The article discusses recent trends in Henry Hub spot prices, placing special emphasis on the relationship between prices and storage practices in both the East and Producing regions. It also highlights overall market trends in recent years and provides an indication of current market conditions in the East Consuming Region and expected price levels. Special attention is devoted to

storage for several reasons. First, storage withdrawals are the swing source of supplies and satisfy a significant proportion of total demand during the heating season. Second, of the three supply components, storage information is the most current.<sup>2</sup> Also, in contrast to other sources of natural gas supply, working gas storage levels represent inventories ready for market.

## Pre-Heating Season Prices: The Storm Before the Calm?

The 3-month period leading up to the beginning of the 1997-98 heating season witnessed quite different price behavior from that of the past 3 years (Figure FE1). Weekly average spot prices at the Henry Hub at the beginning of August 1997 were nearly identical to year-earlier levels and about \$0.80 per MMBtu above those in August 1994 and 1995. From this point, spot prices climbed almost unrelentingly through October. Weekly average prices during October ranged from \$0.50 to \$1.13 more than levels the previous year. For the 7 weeks between the beginning of October and the middle of November, prices greatly exceeded those in 1994 and 1995. For 4 of these weeks, prices were more than double the corresponding 1994 prices.

Not only were spot prices during this 3-month period much higher than in the past 3 years, but for much of this period spot and futures prices were very volatile, with futures prices consistently higher than spot prices in late September and throughout most of October. From the second week in September through the third week of October, prices often varied by \$0.25 per MMBtu or more from one week to the next and futures settlement prices at the Henry Hub for month-ahead deliveries were often more than \$0.25 per MMBtu higher than spot prices.

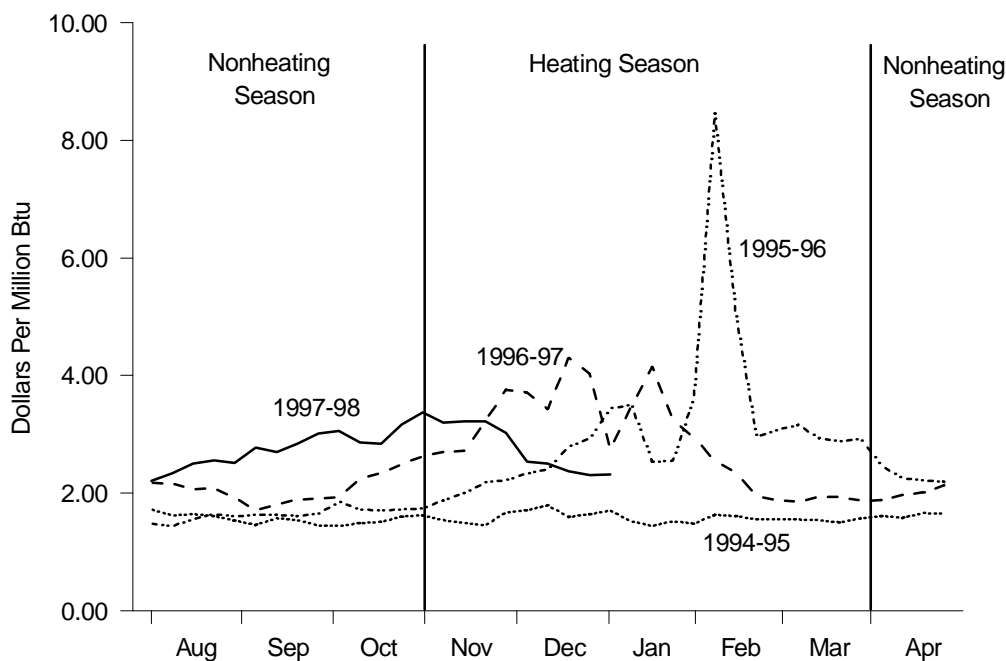
---

<sup>1</sup>The regions used in this analysis correspond to the three regions in the American Gas Association's weekly storage survey. The East Consuming Region includes all States east of the Mississippi River less MS, plus IA, NE, and MO. The Producing Region comprises TX, OK, KS, NM, LA, AR, and MS, while the West Consuming Region consists of all States west of the Mississippi River less the Producing Region and IA, NE, and MO.

---

<sup>2</sup>Since 1994, the American Gas Association has conducted a weekly survey of gas storage, presenting the results on a national level and separately within three regions of the country: the Producing Region, the East Consuming Region, and the West Consuming Region. The Energy Information Administration reports monthly survey data in the *National Gas Monthly* 2 months following the report month and preliminary estimates at the national level for the 2 most current months.

**Figure FE1. Henry Hub Weekly Average Natural Gas Spot Prices**



Source: Pasha Publications, Inc., *Gas Daily*.

This runup in prices prior to the heating season, accompanied by high price volatility and market premiums for future supplies (reflected by futures prices consistently higher than current spot prices), is attributable to a variety of factors. Some of these factors involve demonstrable market conditions, while others stem from various perceptions of market conditions or possible developments.

One reason for the elevated prices is that replacement costs for production are significantly more than year-ago values. Leasing rates for offshore rigs have doubled in the last year from slightly over \$30,000 per day to almost \$70,000.<sup>3</sup> Yet, the major problem facing drillers is having adequate crews to staff rigs.<sup>4</sup> The skilled workforce has been declining fairly steadily in the past 10 years. As late as the fall of 1995, when the conventional wisdom in the domestic oil and gas industry was that low prices would prevail at least through 1996, support was very much alive for continued aggressive costcutting, including few new hires.

The slowdown in the growth of imported gas from Canada in recent years is another factor in the higher prices. Canadian gas, even including the costs of

transportation to various markets, is less expensive on average than domestically-produced gas. For example, the average price of gas for December 1997 delivery at the AECO-C Hub, the major hub in Canada, was \$1.17 per MMBtu.<sup>5</sup> This compares with a price of \$2.20 per MMBtu at the *Gas Daily* pricing point on the El Paso pipeline in New Mexico, which is near one of the least expensive producing areas in the United States. At Emerson, a popular pricing point for Canadian gas into the North Central United States, gas for December delivery was \$2.33 per MMBtu. In comparison, the natural gas price at the Henry Hub in Louisiana, which also serves the North Central United States, the cost was \$2.54 per MMBtu. However, the pipelines available to bring gas from Canada into the United States are becoming more fully utilized, thus dampening the growth of imported Canadian gas, even though about 230 million cubic feet per day of deliverability from Canada was added in 1997. Several new pipeline projects have been proposed, but until the new lines are in operation, the slowing growth of imports will continue to put upward pressure on prices if demand increases as expected.

<sup>3</sup>Ira Breskin, "Oil and Gas Drilling," *Investor's Business Daily* (November 10, 1997), p. 39.

<sup>4</sup>Martha M. Hamilton, "a Return to Success for Oil Services," *The Washington Post* (November 9, 1997), p. H2.

<sup>5</sup>The AECO-C Hub price was converted from joules to British thermal units (Btu) using a conversion factor of 1,055 joules per Btu. Canadian dollars were converted into U.S. dollars using an exchange rate of 0.7 U.S. dollars to 1 Canadian dollar. Pasha Publications, *Gas Daily Price Guide* (Arlington, VA, December 1997).



An unexpected increase in natural gas demand by electric utilities in the south central part of the United States as a result of coal deliverability problems also contributed to the higher prices. This past summer and fall, these utilities were using increased amounts of natural gas to substitute for the decline in rail shipments of coal (see Box, "Coal Deliveries to Texas Electric Utilities").

Another reason for the relatively high prices is the perception that increased demand for gas by industrial customers may have significantly increased the average level of gas flowing on particular pipeline systems. These higher flow rates would increase the chance of constraints developing along these systems when demand shifts suddenly. This may encourage companies to pay more for guaranteed supplies of incremental gas along these systems. If customers purchase guaranteed supplies, they avoid the chance that congestion will preclude their access to supplies. If congestion develops, it could raise prices even higher. In short, there was increased concern in the late summer and early fall of 1997 that the chance of pipeline bottlenecks had grown in the past several years.

There was also much concern in the fall of 1997 as to the amount of working gas that would be held in inventory at the beginning of the heating season. This concern was a major factor in the elevated prices and great price volatility.<sup>6</sup> Industry participants and observers wanted to know: first, would storage levels this year reach or exceed those of last year—a year in which they had reached record low levels; and second, would these levels be sufficient to accommodate any increased demand over the previous year's levels? (See the discussion under "Inventory Levels, Withdrawals, and Pre-/Early Heating Season Prices.")

## Storage: The Key to Prices

Of the factors discussed, perhaps the most important is that of natural gas storage. This is certainly true in the near term leading up to the heating season and throughout the heating season. In fact, in the view of many natural gas industry participants and observers, it would be difficult to overstate the importance of storage and information about storage levels and stock builds and drawdowns in influencing prices in both cash and

futures markets. The reverse is also true with prices having a direct impact on storage practices.<sup>7</sup>

Storage withdrawals are the swing source of supplies and satisfy a significant proportion of total demand during the heating season, particularly in the East Consuming Region. During heating seasons, monthly withdrawals from the region's storage facilities average about 27 percent of the region's monthly consumption. During the past 7 years, this proportion has often been over 30 percent, and as high as 38 percent. The way the market perceives the adequacy of storage levels relative to expected demand in the East Consuming Region is likely to have a major influence on both current and future prices, because working gas levels, storage withdrawals, and consumption in this region typically average about 65 percent of the national total (Figure FE2).

Certainly some of the large incremental demand by commercial and residential customers during the winter is satisfied by an increase in production and imports, but still the largest proportion of this demand is satisfied with withdrawals of gas from storage (Figure FE3). The similar appearance of the lines for residential and commercial consumption and storage withdrawals in Figure FE3 illustrates visually the dependence of these sectors on storage withdrawals to satisfy heating season demand. In comparison, imports and dry gas production are relatively flat, although gas production increases modestly between November and December. Some of this production in November and December is stored as linepack when available supplies to market exceed actual deliveries.<sup>8</sup> All supply series tend to decline after January as the worst of winter is usually over by this time.

Of the three components of supply—production, imports, and storage withdrawals—storage is the only component for which there is reasonably current, comprehensive, and widely-disseminated information about its magnitude and availability. While there are undeniably myriad factors that influence gas prices, many are elements for which there are sparse, incomplete, or

---

<sup>6</sup>Volatility in daily futures prices can also influence volatility in spot prices when hedge funds open or close out futures position. This occurs because of the large position these companies take in the market.

---

<sup>7</sup>Some storage operators delay storage build ups in anticipation of lower prices or add to storage when prices are perceived to be low. For a further discussion of this and related issues, see J.H. Herbert, J.M. Thompson, and C. Ellsworth, "Gas Storage: What Moves the Market and What Doesn't," *Public Utilities Fortnightly* (December 1997), pp. 46-51.

<sup>8</sup>When the average amount of gas delivered to a pipeline exceeds the average amount taken, then the pipe can be considered as packed with gas and the gas designated as linepack.

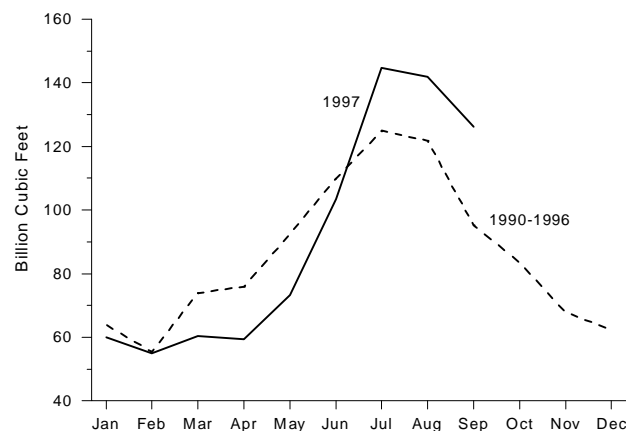
## Coal Deliveries to Texas Electric Utilities

The merger of the two largest rail systems in the Southwest, the Southern Pacific and Union Pacific (UP) under the UP banner, has brought about severe logistical problems that have affected the delivery of goods and commodities throughout the region. Delay in the shipment of western coal to the region's electric utilities has been one of the more serious problems caused by this predicament and the situation seems most prevalent in Texas. The Texas Railroad Commission reported in October that several large electric utilities in the State had increased their consumption of natural gas in order to offset low coal stocks.

Texas is the largest consumer of natural gas in the country (3.5 trillion cubic feet in 1996), with electric utilities accounting for almost a third of the State's consumption. Based on Energy Information Administration data, most of the consumption by electric utilities occurs during the months of April to October to meet air-conditioning demand. In 1996, 70 percent or 722 billion cubic feet (Bcf) of the total 1,040 Bcf consumed by Texas electric utilities occurred in the April-to-October period. Energy Information Administration data also indicate that electricity demand in Texas during the winter months is, on average, about a third less than in the summer, again because of the reduction in the air-conditioning load.

The Department of Energy's Office of Emergency Management (EM) has reported that several electric utilities in Texas have instituted coal conservation plans and increased their consumption of natural gas. The most recent EIA data indicate that natural gas consumption at electric utilities in Texas increased in August and September by 18 percent and 40 percent, respectively, when compared with the same months last year. Coal consumption also increased during the same time period but at a much lower rate—3 percent in August and 1 percent in September. As shown in the following figure, natural gas consumption at Texas utilities during the period July through September is about 20 percent above the average for the previous 7 years.

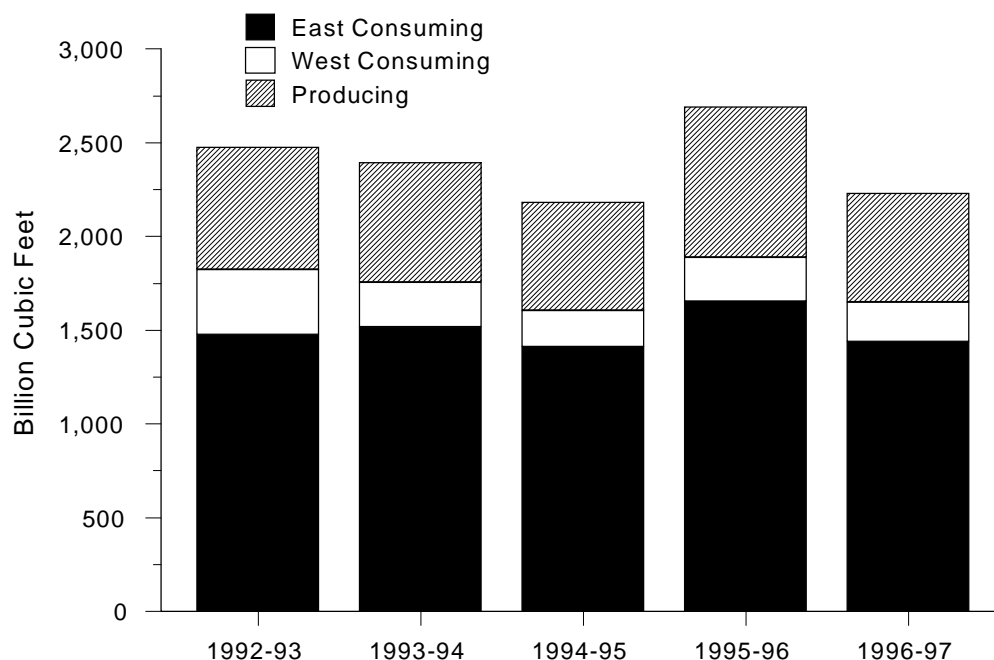
**Natural Gas Consumption by Texas Electric Utilities**



The weather in much of the Southwest and especially in Texas was quite hot in September, with cooling degree days for the month 21 percent higher than normal. In response to the high temperatures, electricity demand in Texas increased about 20 percent compared with the same month last year. These increases in gas consumption in Texas in recent months would indicate that the coal shipment problems in Texas have affected natural gas use and contributed to the price increase that began in August.

In late October, Union Pacific reported to the Surface Transportation Board, the successor to the Interstate Commerce Commission, that the situation has stabilized and is showing some improvement. The company reported that it is making progress in unclogging train movements into and out of Texas. The Office of Emergency Management reported in November that Union Pacific's overall car exchanges were increasing and unit coal car turnaround time had improved but average train speed still remained below normal. Based on recent price activity at major market hubs in Texas (prices have declined more than \$1.00 per MMBtu since late October), it seems that supplies of natural gas are adequate to meet increased demand from electric utilities.

**Figure FE2. Natural Gas Withdrawals from Storage in the East Consuming Region Make Up a Significant Portion of Total U.S. Withdrawals During the Heating Season**



Source: Energy Information Administration, Office of Oil and Gas, *Natural Gas Monthly*.

untimely data; others are perceptions based on “guesstimates” or anecdotal information. In a way, storage information has become a proxy for industry conditions. Storage data, because they are relatively current and readily available, are viewed as the “bottom line” by the market in terms of current and near-term conditions, particularly leading up to and during the heating season.

In contrast to the other supply components, working gas storage represents gas readily available for markets. The other components of supply are generally upstream of markets and thus do not represent supplies readily available. Consequently, concerns about the adequacy of storage levels can put significant upward pressure on prices as the heating season approaches, while relatively large amounts of gas in storage throughout much of the heating season can depress prices even below levels experienced during the off-peak summer months.

## Heating Season Demand: The Key to Storage Utilization

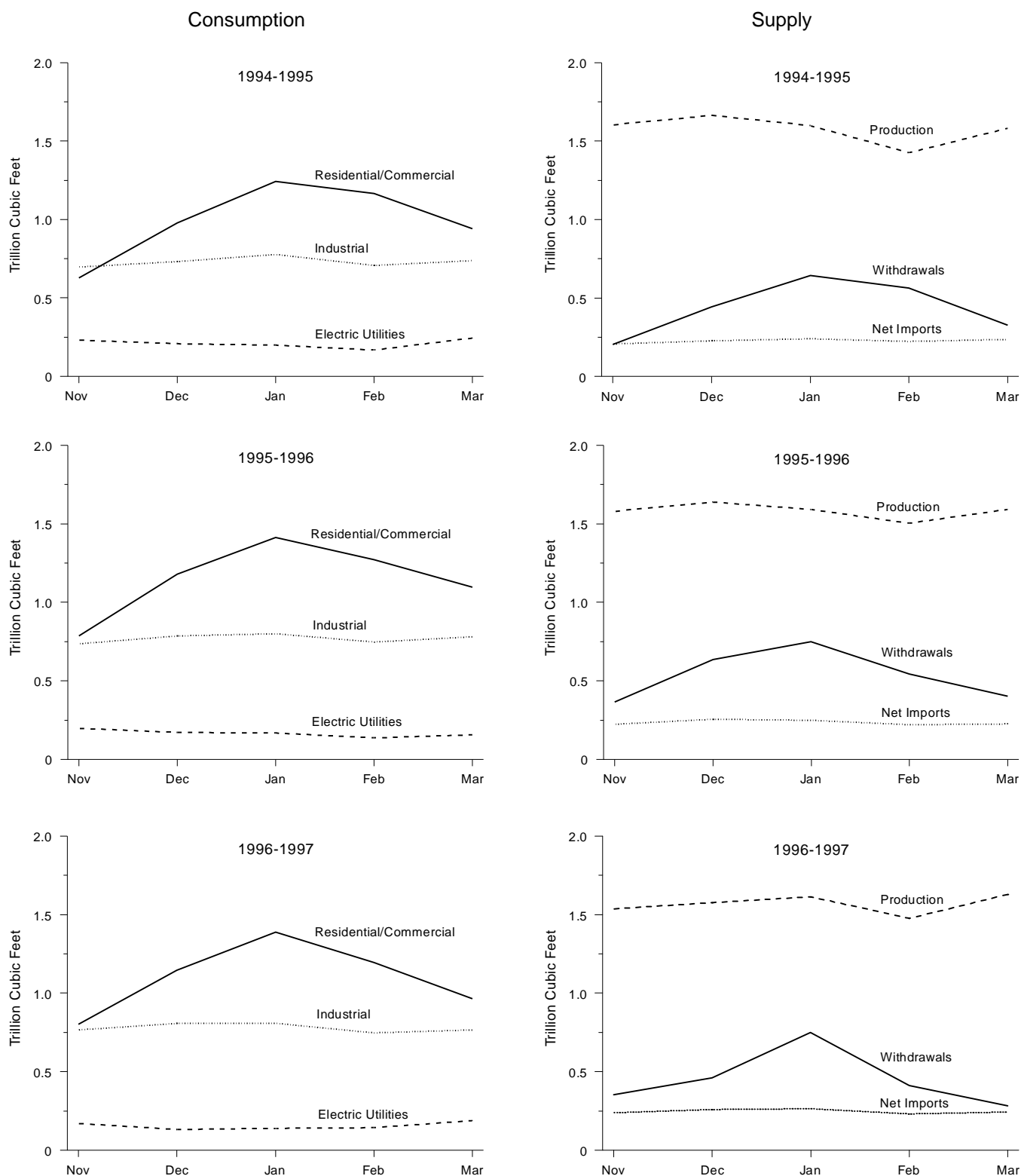
Just as storage is the key to natural gas prices before and during the heating season, demand experienced during the heating season is the primary determinant of storage

utilization. Demand, or consumption, during the winter months essentially has two components. One component is the more or less continuous demand for gas in the industrial sector. This demand represents gas used for a wide range of purposes and processes in industrial and manufacturing applications. This demand is more or less steady (but not constant) throughout the year.

Over the past 7 years, industrial sector consumption has grown steadily (Table FE1). This growth has been due to overall growth in the manufacturing sector and to reductions in natural gas prices to this sector as a result of industry restructuring. Consumption trends between years for this sector are easier to observe than for other end-use sectors because industrial demand is less influenced by weather.

A significant portion of the increase in industrial consumption since 1990 has been at cogeneration facilities, which allow companies to use natural gas not only for traditional applications of heating and manufacturing but also for electric power production. The increased use of natural gas for electric power production is expected to continue as a larger number of manufacturers increasingly use their own generators for the production of electricity instead of purchasing it from utilities.

**Figure FE3. Natural Gas Residential/Commercial Consumption and Storage Withdrawals Vary Greatly During Heating Seasons**  
(Trillion Cubic Feet)



Source: Energy Information Administration, Office of Oil and Gas, *Natural Gas Monthly*.

**Table FE1. Natural Gas Consumption and Supply During the Heating Season**  
(Billion Cubic Feet)

Heating Season	Consumption				Supply		
	Residential	Commercial	Industrial	Electric Utilities	Dry Gas Production	Withdrawals	Net Imports
1990-91	3,087	1,659	3,105	872	7,636	1,966	704
1991-92	3,173	1,697	3,311	915	7,584	2,213	784
1992-93	3,456	1,826	3,416	885	7,626	2,377	931
1993-94	3,588	1,884	3,601	887	7,858	2,394	1,035
1994-95	3,199	1,756	3,651	1,051	7,875	2,182	1,133
1995-96	3,717	2,027	3,850	831	7,906	2,698	1,176
1996-97	3,517	1,969	3,887	773	7,832	2,256	1,235

Source: Energy Information Administration, Office of Oil and Gas, *Natural Gas Monthly*.

The second major component of wintertime demand consists primarily of the space-heating requirements in the winter months in the commercial and residential sectors. While these sectors have some year-round consumption for such activities as cooking and water heating, this is far overshadowed by wintertime space-heating consumption, which can be substantial. During the heating season, combined consumption in the residential and commercial sectors exceeds consumption in the industrial sector (Table FE1).

Space-heating demand is also very temperature-sensitive: changes in combined residential and commercial consumption between heating seasons are more influenced by weather differences than by changes in the number of commercial establishments and households using natural gas. Because of this temperature-dependence, combined residential and commercial demand is highly variable and can change rapidly in a very short period. Storage plays the key, critical role during this time because it is the primary source of readily available incremental supplies to satisfy this temperature-driven “swing” demand. As shown in Figure FE3, combined residential and commercial consumption rise and fall more or less in tandem with storage withdrawals throughout the heating season, illustrating the close relationship between the two.

Thus, wintertime demand is dominated by: (1) the primarily industrial, somewhat steady base load; and (2) the temperature-sensitive, residential/commercial space-heating load, which can “swing” up or down, sometimes drastically, depending on the weather. In trying to plan for heating season requirements, the gas industry is faced

with the uncertainty of weather-determined demand. If a winter is particularly cold, demand could grow significantly, while in a milder winter, much or perhaps all of the increased demand as a result of normal economic growth could be offset by less-than-expected demand for space heating.

## Assessing Heating Season Demand

To analyze and attempt to quantify these two components of heating season demand in the important East Consuming Region, a multiple regression analysis was conducted (see Technical Appendix). The results of the analysis provide a method for estimating monthly consumption in the East Consuming Region during the current heating season, based on consumption trends over the past 7 heating seasons, and taking into account the effects of prevailing temperatures.

The results of this analysis indicate that, on average, consumption in the East region attributable to “normal” economic growth<sup>9</sup> can be expected to be about 28 billion cubic feet (Bcf) per month, or a total of about 140 Bcf greater in a particular heating season over the previous heating season. This corresponds to about 0.93 Bcf per day of increased consumption (i.e., 140 Bcf divided by 151 days in November through March). Further, for each 1 degree F. difference between the observed monthly

<sup>9</sup>This growth is attributable primarily to consistent increases in industrial activity throughout most of this period, plus the addition of new customers in all end-use sectors.

temperature during a heating season month and the “normal” temperature<sup>10</sup> for that month in the East Consuming Region, there is a corresponding change in consumption of about 19.6 Bcf. If the average temperature is 1 degree warmer than normal, consumption falls by 19.6 Bcf; conversely, if the temperature is 1 degree colder than normal, consumption increases by 19.6 Bcf. Likewise, this corresponds to a temperature-related “swing” factor of about 0.65 Bcf per day per 1 degree F. difference.

The ratio of the “trend” growth factor to the swing factor (i.e., 0.93 Bcf per day divided by 0.65 Bcf per day per 1 degree F. difference) is 1.43. In other words, for each month for which the observed temperature is 1.43 degrees above normal in the East Consuming Region, the expected drop in temperature-driven space-heating demand will just offset the expected increased demand from normal economic growth, and the resulting total demand will be expected to be unchanged from the previous year.

The ratio can be computed for each month of the heating season and for the entire heating season. If the January temperature is 1.5 degrees warmer than the previous January, then total demand during January would be expected to be similar to the previous January level. If instead, demand were much higher despite the 1.5 degree temperature increase, it would raise the question as to the cause of this “unexpected” increase.

## Recent Trends in Storage Operations and Inventory Management

Until this year, working gas inventories at the beginning of the heating season had declined every year except one since 1990, even though consumption, particularly in the temperature-sensitive residential and commercial sectors, has generally increased. This trend toward lower inventory levels has occurred not just in the natural gas industry but in much of the energy industry serving space-heating demands. For example, between 1994 and 1996, stocks of natural gas, oil, and propane all declined from year-earlier levels (Figure FE4). At the same time, October spot prices at the Henry Hub have been higher than year-earlier levels for the past 3 years (Figure FE1), correlating with the decreased levels of working gas inventories.

Many feel that this trend of lower inventory levels reflects an increase in efficiency in the industry fostered by the implementation of Order 636, which brought partial deregulation and increased competition to industry structure and operations. Another factor is the increased ability that industry participants have to move gas around more easily—either among storage reservoirs accessible to a given pipeline system or even across different pipeline systems. This added flexibility of transporting gas was one of the major objectives of Order 636. The development of hubs, market centers, and liquid spot markets along portions of pipeline systems has made it easier to move the gas from a pipeline where demand has unexpectedly dropped to one where demand has unexpectedly increased. Because price discovery is usually good at market centers and hubs, their existence facilitates the trading of gas across pipeline systems and can also ease demand for storage inventories in certain situations.

The decline in the amount of working gas in the face of increased gas demand can also be partly explained by the development and use of additional high-deliverability salt cavern storage facilities. Between 1993 and 1996, deliverability from storage increased by 8 percent, primarily because of increases in salt cavern storage capacity.<sup>11</sup> About 34 billion cubic feet (Bcf) of working gas capacity was added to salt cavern facilities, increasing daily deliverability by almost 4.1 Bcf which was almost 60 percent of total deliverability additions. Currently, 116 Bcf of working gas is stored in U.S. salt cavern reservoirs, which represents 11 Bcf of daily deliverability.

Unlike conventional storage reservoirs, a salt cavern storage facility is designed to be filled several times during the heating season. On average it takes about 10 days to withdraw all the gas from a salt cavern site and about 20 days to reinject to full capacity. The capability to inject during the heating season allows a company to increase the amount of withdrawals during the season. Thus the 34 Bcf increase in salt cavern storage capacity during the past few years represents an increase of more than 100 Bcf in the gas available for delivery from storage to market during the heating season. Withdrawals from salt cavern storage as a percentage of working gas capacity has also increased, from 16 percent in January 1992 to 35 percent in January 1997. Withdrawals from salt cavern facilities are at their highest level of the year during January.

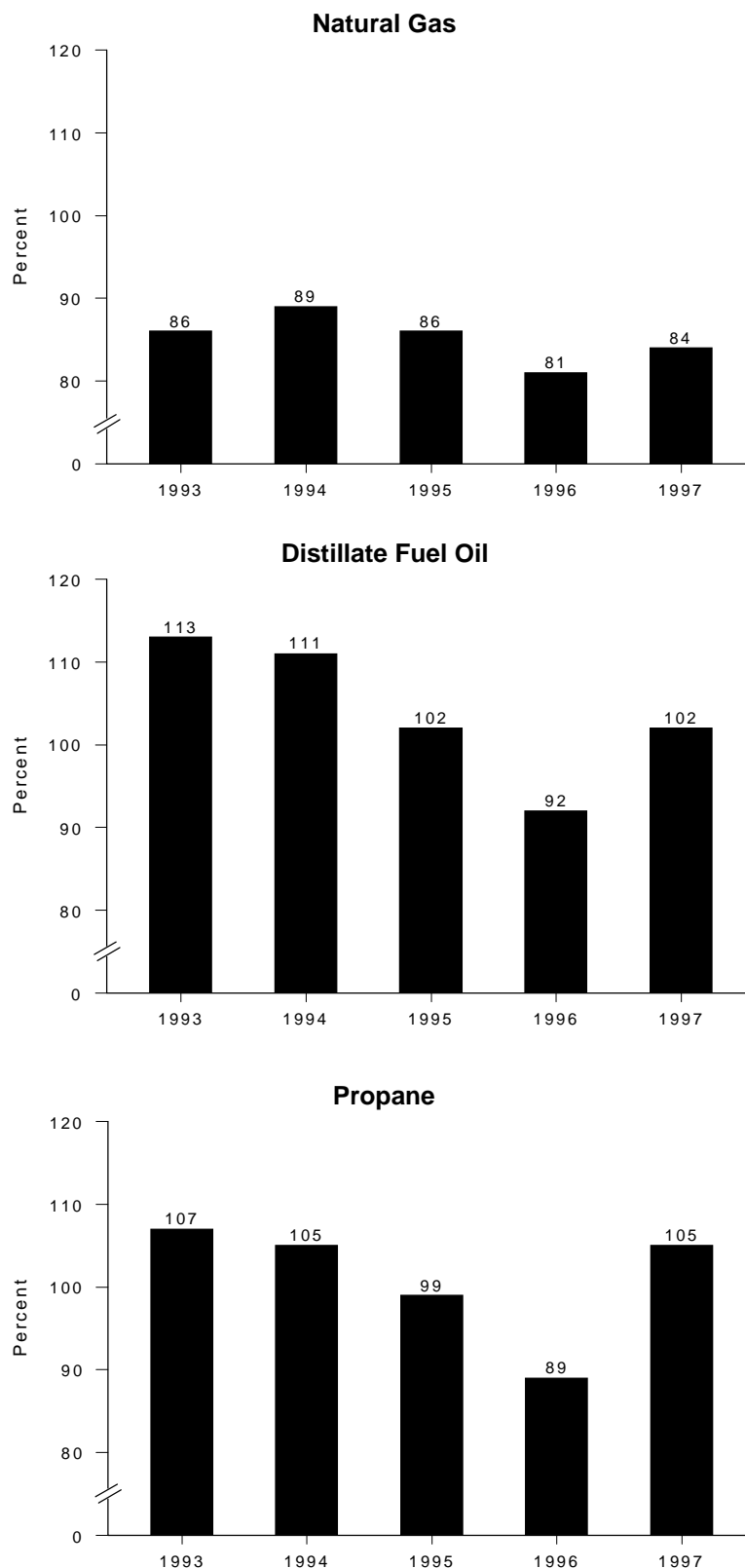
---

<sup>10</sup>Normal temperature refers to the average temperature for major cities in the region over the 30 years from 1961 through 1990, as computed by the National Weather Service.

---

<sup>11</sup>Energy Information Administration, “U.S. Underground Storage of Natural Gas in 1997: Existing and Proposed,” *Natural Gas Monthly*, DOE/EIA-0130(97/09) (Washington, DC, September 1997).

**Figure FE4. Stocks of All Heating Fuels Have Behaved Similarly in the Past 5 Years**  
(Inventory Index Base-November 1, 1990)



Note: The reported numbers are values for November 1 as a percentage of the value on November 1, 1990.

Source: Energy Information Administration, Office of Oil and Gas, *Natural Gas Monthly* and *Petroleum 1996: Issues and Trends*.

Some salt storage facilities can inject and withdraw gas on the same day, which provides the flexibility to take advantage of arbitrage and other relatively risk-free commercial opportunities. In principle, large amounts of gas can be withdrawn from salt cavern storage facilities when demand and daily spot prices increase suddenly in late fall and early winter. When demand and daily spot prices subsequently decline, gas can be injected into storage as a replacement for the gas that was previously withdrawn from storage and sold at a relatively high price. Thus, producers or third parties acting for producers can withdraw gas from storage when demand and prices rise and then inject gas into storage when demand declines and prices fall.

Injections of gas into storage during the heating season in the Producing Region, where most of the salt cavern storage reservoirs are located, have exceeded the levels of 1992-93 in each succeeding heating season. In 1996-97, injections were 22 percent more than during the previous heating season and about 90 Bcf greater than in 1992-93 (Figure FE5) or an increase of almost 1 Bcf per day. There is still the possibility of larger increases since injections during the heating season can be several times as large as the working gas capacity in salt cavern storage facilities.

Utilization patterns for conventional storage sites in depleted gas and oil fields are very different from salt storage. In contrast to salt storage, there is a reluctance to withdraw increasing amounts of gas from storage early in the heating season. Companies often hold onto their gas as a form of insurance and as a means of maintaining deliverability at a relatively high level. Much of the stored gas, especially east of the Mississippi River, is owned by local distribution companies that may have regulatory disincentives that inhibit them from taking advantage of rising spot prices.

Finally, another possibly important factor in the continued reduction in underground working gas storage levels is any improvements in the use of linepack in anticipation of demand surges during forecasted cold snaps. As noted earlier, pipelines can be packed with extra gas when deliveries to the line exceed customer demand, which is generally the case in the fall and early winter. For the 5 years from 1992 through 1996, the average difference between supplies and deliveries was 80 Bcf, while the average difference in November, when linepack appears to be at its highest, was 212 Bcf.<sup>12</sup> Linepacking is often similarly high in December, and sometimes even higher.

---

<sup>12</sup>This information is published in *Natural Gas Monthly* tables as part of an imbalance item, which also includes losses from the pipe and measurement errors associated with counted supplies and deliveries from different respondents.

## **Inventory Levels, Withdrawals, and Pre-/Early Heating Season Prices**

This year, stocks of all fuels for the current heating season are above year-earlier levels. While prices for propane and distillate oil are lower than a year ago, as noted earlier, this was not the case for natural gas at the start of the heating season. Although natural gas stocks on November 1 were above last year's level, October spot prices were much higher than last year and were roughly double their value in October 1994. Indeed, until the third week in November, natural gas prices were above year-earlier values. At first glance, this is contrary to what one might expect.

However, upon examining the situation with storage a little more deeply, it can be seen that even though total gas inventories at the beginning of the heating season were above year-earlier levels by about 82 Bcf according to American Gas Association estimates (2,807 Bcf vs. 2,725 Bcf), stocks in the important East Consuming Region were about 30 Bcf below last year's levels (1,691 Bcf vs. 1,721 Bcf). Further, as previously discussed, general economic growth in the region is expected to increase consumption by 140 Bcf during the heating season. Thus, not only were inventory levels in the East down from the previous year, but perhaps a more telling statistic—the ratio of inventory with respect to expected demand—was also lower (Figure FE6).

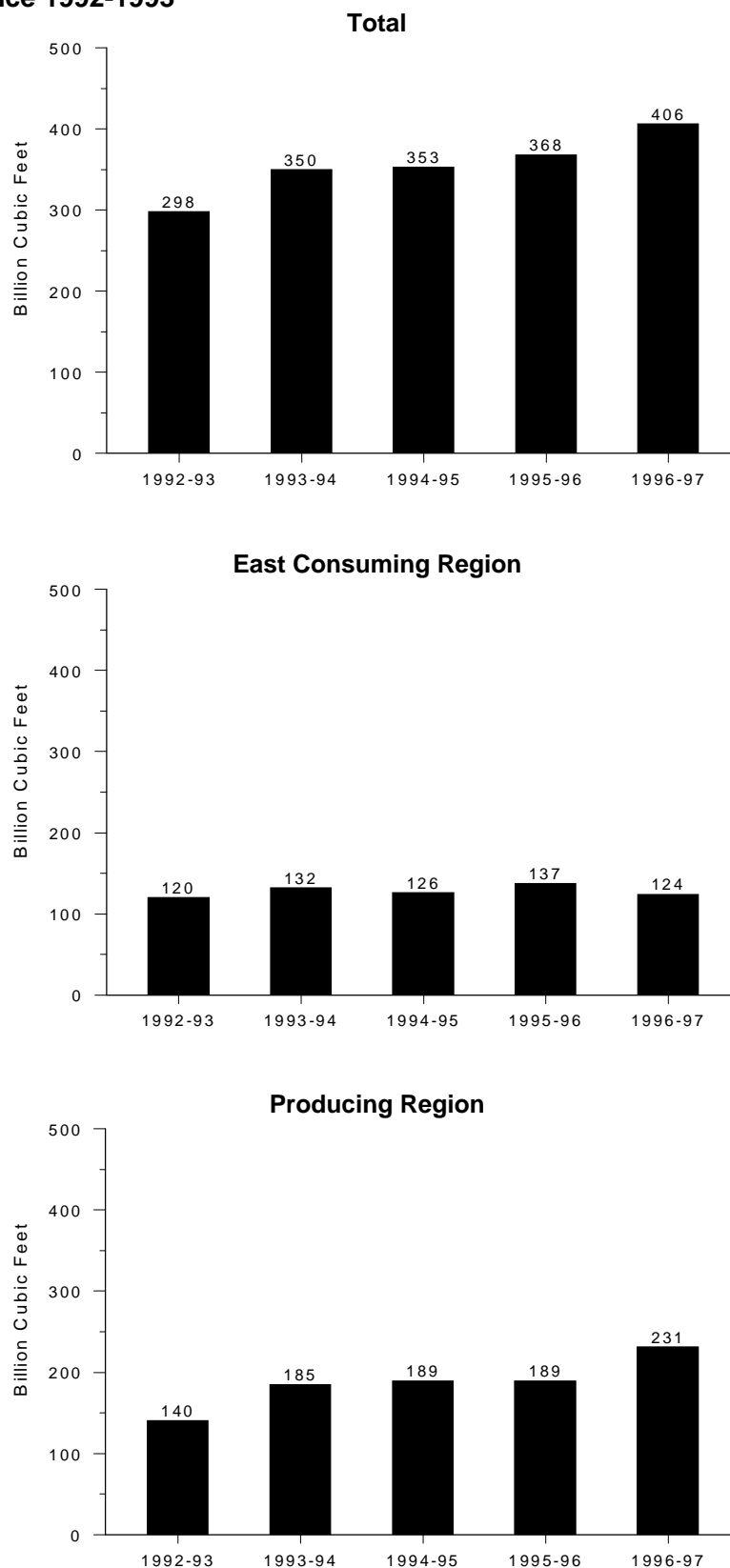
This situation provided support for higher prices at the beginning of the heating season. However, when storage withdrawals were modest during the first several weeks of the heating season, storage levels in the East Consuming Region equaled, and in some weeks actually exceeded, year-earlier values. By the end of November, inventories in the East Consuming Region were about 33 Bcf higher than the year before. Futures prices plummeted \$0.50 per MMBtu between the third and fourth week in November, returning to levels of early September. This was the first time in 4 years that November futures prices were below those of the previous November.

## **Early-to-Mid-Winter Demand and Price Outlook**

Throughout the early months of the heating season, the industry will closely watch storage data for indications of the shifting balance of supply and demand, and storage data will likewise have a great influence on prices. In turn, storage utilization will be driven largely by the the temperature-sensitive demand in the residential

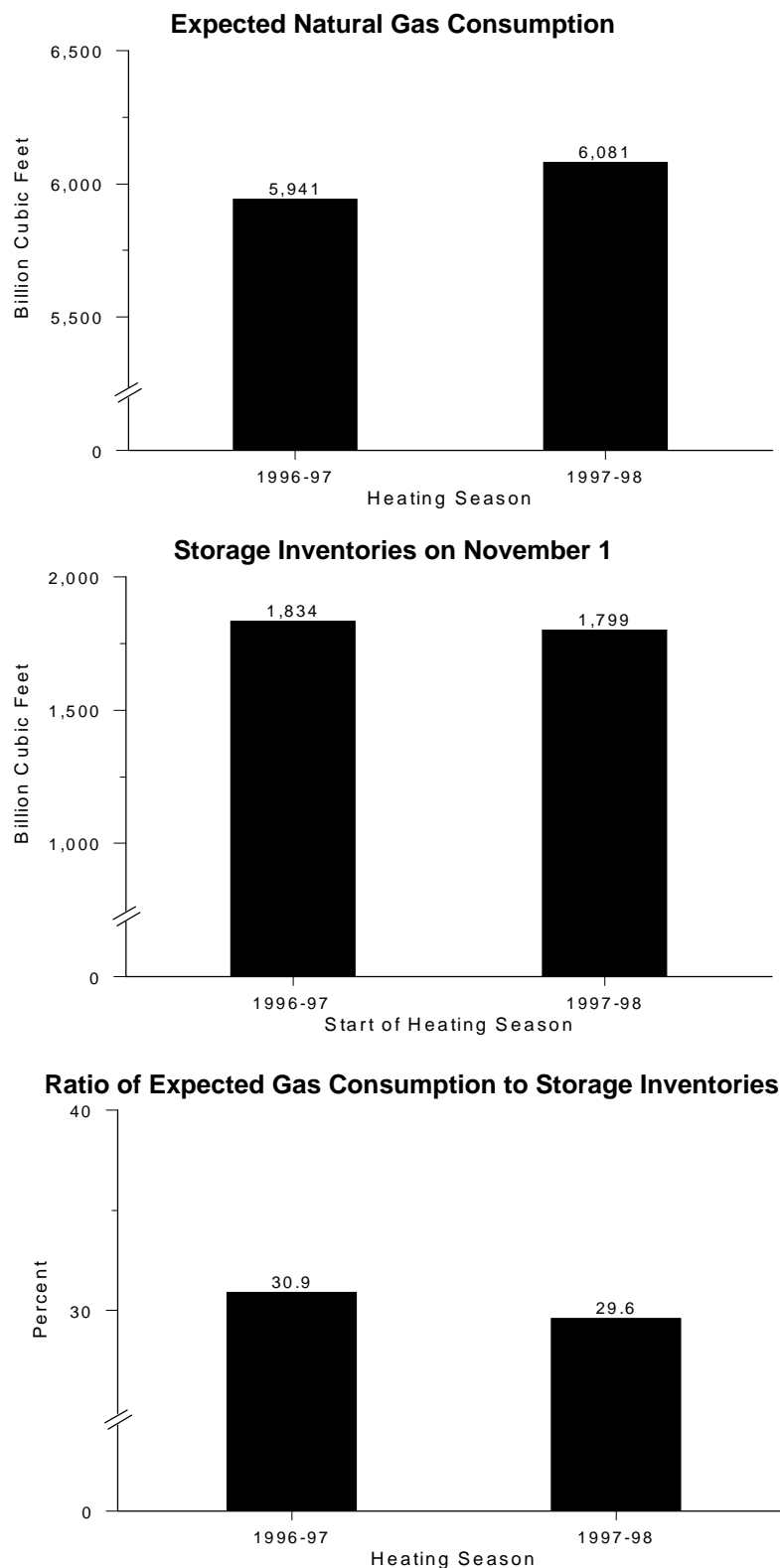


**Figure FE5. Natural Gas Storage Injections During Heating Seasons Trend Upwards Since 1992-1993**



Source: Energy Information Administration, Office of Oil and Gas, *Natural Gas Monthly*.

**Figure FE6. Expected Natural Gas Consumption in East Consuming Region Relative to Storage Inventories**



Note: Because vertical scales differ, graphs should not be directly compared.

Sources: **Storage Inventories:** Energy Information Administration (EIA), Office of Oil and Gas, *Natural Gas Monthly*.

**Expected Natural Gas Consumption:** EIA estimates.

and commercial sectors, particularly in the East Consuming Region. Thus, during the heating season, storage utilization and natural gas prices, both spot market and futures, are heavily influenced by, and subject to the variability of, the weather.

The regression analysis (see Technical Appendix) of heating season consumption in the East Consuming Region provides a way of quantifying the effect of deviations from normal temperature on wintertime demand. As previously discussed, the analysis shows that, for each 1.43 degrees that the observed temperature is above normal over a given period of time, the decreased demand as a result of the warmer weather would just offset the increased demand resulting from normal economic activity and growth in customer base, etc. For example, last year the average temperatures for December and January were 2.16 degrees above and 0.82 degrees below, respectively, normal temperatures. The average of these temperature differences is about 1 degree F. above normal. Thus, if temperatures for this 2-month period are above normal levels this year by 2.43 degrees F. or more in the East Consuming Region, it is expected that reductions in consumption from this rise in temperatures will equal or exceed increases in consumption from normal growth trends.

What kind of weather patterns will occur during this heating season? Much has been made in the media about the "El Nino" climate event that is currently affecting weather on a worldwide scale. Current weather forecasts expect wetter-than-normal conditions to prevail in the southern States and warmer-than-normal temperatures in the northern States from the Rocky Mountains to the Great Lakes. To the extent that the Weather Service's predictions are correct, the reduced demand as a result of higher-than-normal temperatures will tend to put downward pressure on prices.

In addition to weather, a number of other factors could affect the supply-demand balance this heating season and influence price levels. These are:

- **Fuel switching.** Relatively high natural gas prices in the past several months may have encouraged some customers to seek out other sources of supply—oil by industrial customers and, in some instances, coal by electric generators as power from coal is increasingly traded to supply peak electricity needs in parts of the country not dependent on Union Pacific for coal shipments. To the extent that this has happened, some of the demand for natural gas will have eased, tending to soften prices.
- **Storage operations and production.** The ability to inject gas into salt cavern storage during the winter

allows producers to produce at a relatively steady rate of production. The steady or optimal rate of production improves the economics of production. This will tend to put downward pressure on prices.

- **New pipeline capacity.** New pipeline builds added 3.3 Bcf of deliverability in 1997. This increase in deliverability will reduce the chance of bottlenecks, assuming that the pipeline grid is well connected in the Louisiana producing area. This should put downward pressure on prices.
- **Increased efficiency of utilization of storage and pipeline assets.** While total inventories at the beginning of this heating season were above year-earlier levels, part of the reason for higher-than-expected prices at the beginning of the heating season was that inventories in the East Consuming Region were below those of last year. However, in principle, if the system operates efficiently and with some foresight, gas from Producing Region inventories, particularly that held in high-deliverability salt cavern storage facilities, can be dispatched in such a way as to make up some of the temperature-driven increases in demand in the East Consuming Region. Expected increases in demand in the East, based on anticipation of colder temperatures, should result in a chain reaction of increasing flows of gas on pipelines, increased storage withdrawals, and rising prices at markets along the pipelines' systems. If the regions are well-connected, these actions should be communicated upstream to the Producing Region, resulting in increased storage withdrawals to substitute for or replace the additional demand being experienced throughout the downstream portions of the systems. This improved efficiency should tend to put downward pressure on prices.

Thus, gas demand this winter could begin to decline from year-earlier values because of milder weather and consumers' response to the high prices of the past several years. Milder temperatures should also reduce the rate of storage withdrawals. Thus, at the end of January, storage levels could be above year-earlier values, even in the East Consuming Region, which could put additional downward pressure on prices throughout late winter and early spring.

## Conclusion

Natural gas spot prices are particularly volatile during the heating season, responding quickly to changes in weather and reported storage levels. Storage utilization

and storage data are the industry's key indicators of conditions, and hence of price levels, especially early in the heating season. At that time, average weekly spot prices at the Henry Hub tend to rise or fall in direct reaction to reported weekly storage levels relative to expected demand.

Temperatures in many major residential gas markets are expected to be warmer than normal this winter. This could lead to less gas being consumed than last winter and to reduced demand for storage stocks, which are currently above last year's levels. The lower demand will likely lead to lower prices, with spot prices at the Henry Hub during January perhaps as much as \$0.40 per MMBtu less than during the previous January.

## Technical Appendix: Natural Gas Outlook, 1997-98 Winter

A multiple linear regression equation was used to estimate the expected consumption in the East Consuming Region for the 1997-98 winter heating season (i.e., November 1997 through March 1998). In specifying the equation, it was hypothesized that total consumption is a function of heating season temperatures as well as of annual growth in consumption not connected with or dependent upon weather. Thus, the equation took the form:

East Consuming Region heating season total consumption = constant +  $\alpha$  \* temperature +  $\beta$  \* growth trend + error term

### Defining Variables

The variables used in the regression are as follows:

- **East Consuming Region Heating Season Total Consumption.** The consumption variable represents the sum of end-use consumption during each month (November through March) of the past seven heating seasons, 1990-91 through 1996-97, for the 28 States plus the District of Columbia that comprise the American Gas Association-defined Consuming East Region (i.e., AL, CT, DC, DE, FL, GA, IA, IL, IN, KY, MA, MD, ME, MI, MO, NC, NE, NH, NJ, NY, OH, PA, RI, SC, TN, VA, VT, WI, and WV). End-use data are based on natural gas consumption in the residential, commercial, and industrial sectors reported to the Energy Information Administration (EIA) on Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," and natural gas consumption by electric utilities reported on Form EIA-759, "Monthly Power Plant Report." The monthly sums for all States/District of Columbia were used to arrive at total consumption in the East Consuming Region for the heating season months November 1990 through March 1997.
- **Temperature.** Monthly average temperatures were computed for each of the heating season months in the series November 1990 through March 1997, based on daily high and low temperatures reported by the National Weather Service for four major cities in major gas-consuming areas of the East Consuming Region: Chicago, Kansas City, New York, and Pittsburgh. A daily four-city average temperature was computed by summing the eight observations and dividing by 8. Then a monthly average temperature was computed from these daily four-

city average temperatures by summing the daily average temperatures for each day in a given month, divided by the number of days in that month.

- **Growth Trend.** To capture the effects of "normal," systematic, year-to-year growth<sup>13</sup> in natural gas consumption, a "growth trend" term was included in the equation. This is simply an integer assigned to each set of heating season months, beginning with the number "1" for the months November 1989 through March 1990, (even though these heating season months were not used for estimating the regression) incremented by 1 for each succeeding set of heating season months, through the number "8" assigned to November 1996 through March 1997.

### Initial Results and Equation Modification

Upon examination of the error terms from this initial regression equation, it was noted that the residuals for the months of November and December were consistently negative, indicating that the equation consistently overestimated consumption in these months. To attempt to correct or compensate for this, the regression equation was modified to include a "dummy" term.

- **Dummy Variable.** To construct the dummy variable, the integer "1" was assigned as the dummy term for the months of November and December in the data file and "0" as the dummy term for all other months.

### Final Regression Equation and Results

With the addition of the dummy variable, the new equation has the form:

$$\text{CONSUMPTION(EAST)} = k + \alpha * \text{AVG TEMP} + \beta * \text{TREND} + \gamma * \text{DUMMY} + \text{error term}$$

When the above equation was estimated, the following constant term and regression coefficients were obtained (standard errors are shown beneath each in parentheses):

$$k = 1,679,322 \quad \alpha = -19,616.4 \quad \beta = 28,096.13 \quad \gamma = -117,620$$

---

<sup>13</sup>This growth is attributable primarily to consistent increases in industrial activity throughout most of the period, plus the addition of new customers in all sectors.

(44,698.04) (1,359.098) (3,842.35) (16,768.22)  
 The R-squared of the regression is 0.942. The t-statistics for the regression coefficients are as follows:

k: 25.08       $\alpha$ : -14.43       $\beta$ : 7.31       $\gamma$ : -7.01

## Computing Expected Consumption for the 1997-98 Heating Season

The regression results were used to compute expected consumption in the East Consuming Region. For this computation, it is assumed that temperatures will be “normal”<sup>14</sup> throughout the heating season for the four cities previously identified. Taking the simple average of the normal temperatures for these four cities for the heating season months results in the following combined normal temperatures:

November	=	43.23° F
December	=	32.25° F
January	=	26.06° F
February	=	29.69° F
March	=	40.24° F.

These temperatures can be substituted into the regression equation to estimate consumption in the East Consuming Region for each of the months November 1997 through March 1998. (Note that the integer for the growth trend is increased by 1 from the previous heating season, and therefore is “9” for the 1997-98 heating season.) The resulting estimates, measured in million cubic feet (MMcf), are as follows:

November 1997	=	966,587 MMcf
December 1997	=	1,201,514 MMcf
January 1998	=	1,421,081 MMcf
February 1998	=	1,349,775 MMcf
March 1998	=	1,142,821 MMcf
Total:	=	6,081,778 MMcf, or about 6,082 billion cubic feet.

## Quantifying Changes in Consumption

<sup>14</sup>The National Weather Service (NWS) uses temperature observations over the 30-year period 1961-1990 to compute average temperatures for different time scales (i.e., daily, weekly, monthly, etc.) for thousands of locations throughout the country. These average temperatures are often cited as “normal” for these locations for the different time scales. For this analysis, the monthly 30-year NWS averages were used for the four subject cities.

It is useful to point out a way of interpreting the regression results that can serve as a “rule of thumb” to gauge the effect on consumption of patterns or events whose impacts can be expressed in terms of the number of degrees that temperatures are greater or less than normal.

First, the coefficient of the temperature variable in the regression equation (-19,616) means essentially that, for every 1 degree increase in monthly average temperature, consumption decreases by 19,616 MMcf. Second, because the Trend variable changes by an increment of 1 for each succeeding heating season, the coefficient of the Trend variable (28,096) is essentially an estimate of how much additional consumption in any given month of a heating season compared with the year-earlier level is due simply to systematic demand growth, namely 28,096 MMcf.

Further, the regression equation therefore predicts that total Trend demand growth from one heating season to the next is about five times 28,096 MMcf, or 140,480 MMcf. The ratio of the Trend coefficient to the temperature coefficient (28,096/-19,616), -1.43, is a measure of the amount of increase in average temperature required such that the decrease in temperature-driven demand just equals the rise from normal growth in demand. Thus, in this analysis, a temperature increase of about 1.4 degrees F. in any given month would result in consumption levels equal to those in the same month of the prior heating season.

Finally, this ratio can be used as a rule of thumb applied over any period of time. That is, on average, over any period of time (day, number of days, weeks, etc.), when the average temperature for the time period exceeds the normal temperature for the same period by 1.4 degrees F., the decline in demand as a result of warmer-than-normal temperatures offsets the increased demand resulting from Trend growth. Thus, this ratio can be used to gauge or estimate how consumption in the East Consuming Region is changing during the heating season with respect to the previous heating season.

## Computing Expected Consumption During the 1996-97 Heating Season

Figure FE6 shows expected consumption for the 1996-97 heating season as well as the upcoming 1997-98 heating season. To make the data comparable in the graph, the value for expected consumption for the 1996-97 heating season was computed in the same way as was expected consumption for the 1997-98 heating season. That is, the 1996-97 value was derived using the same regression

equation, assuming normal temperatures for the 1996-97 heating season months (thus, using the 30-year average temperatures for these months), and using the trend integer of 8 along with the other regression coefficients. In other words, expected consumption for the 1996-97 heating season was computed as if that heating season had not already occurred. The value computed in this manner is approximately 5,941 billion cubic feet (Bcf).

An alternative method of computing an estimate for this value was also used. This method involved reestimating

the regression equation after dropping the observations corresponding to the 1996-97 heating season, then using the regression coefficients thus obtained to compute estimated consumption for the 1996-97 heating season. The value thus obtained is approximately 5,997 Bcf—only 56 Bcf, or slightly less than 1 percent, greater than the above estimate. It was therefore decided to use the estimated value derived from the original regression, as described above.

# Highlights

## Overview

This issue of the *Natural Gas Monthly* provides the first estimates of data for the complete year 1997 in the areas of production, net imports, net storage withdrawals, and consumption. Most natural gas price estimates extend through September 1997. This issue also presents the article, "Recent Trends in Natural Gas Spot Prices." The article discusses the volatility in spot prices during recent winter periods. It focuses primarily on conditions and developments in the East Consuming Region and their connection to prices at the Henry Hub in the Producing Region.

Highlights of the most recent data estimates are:

- Dry natural gas production is estimated to be 18,963 billion cubic feet in 1997, 1 percent higher than in 1996. A higher level of production has not been seen since 1981, when 19,181 billion cubic feet was produced.
- End-use consumption is estimated to be 20,107 billion cubic feet in 1997, one-half percent above the record-setting level of 1996.
- Industrial consumption of natural gas, which accounts for 44 percent of all end-use consumption, increased by only 0.4 percent in 1997, reaching 8,903 billion cubic feet.

- The national average wellhead price for natural gas in September 1997 is \$2.44 per thousand cubic feet, 32 percent above that of September 1996. The rise in the wellhead price reflects the behavior of both the spot and futures market prices at the Henry Hub during the same period. Increased levels of gas-fired electricity generation in the State of Texas may have contributed to the rise in supply prices this September.

## Supply

Dry natural gas production is estimated to be 18,963 billion cubic feet (Bcf) in 1997, 1 percent higher than in 1996 (Table 1, Figure HI1). This level of production has not been reached since 1981 when dry production was 19,181 Bcf. Net imports increased by nearly 2 percent in 1997, reaching an estimated 2,834 Bcf (Table 2). These supplies supported an estimated 22,074 Bcf in total natural gas consumption in 1997, a one-half percent increase above the 1996 level. Net changes in storage were nearly balanced during the calendar year as 1997 had an estimated 58 Bcf of net injections.

Average daily production in most months of 1997 exceeded that of 1996 by 1 to 2 percent. The highest production rate of the year was 54.6 billion cubic feet per day in March, which exceeded that of last March by 6 percent.

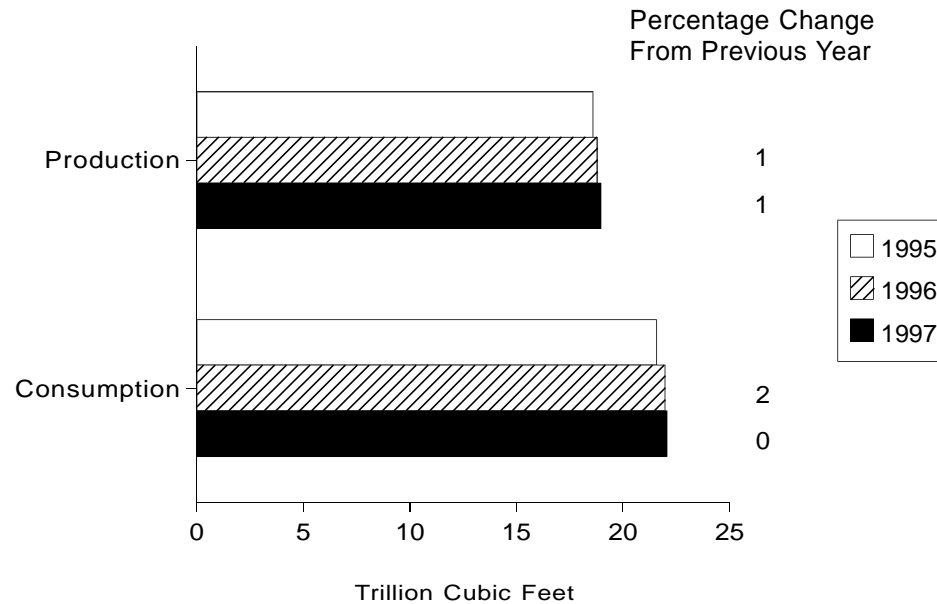
### New Storage Table Presentations for the January 1998 Issue

Beginning with the January 1998 issue of the *Natural Gas Monthly*, the Energy Information Administration (EIA) will publish a new table showing total U.S. underground natural gas storage activities in salt dome storage facilities and in all other types of storage operations. Tables showing the separate storage activities for interstate and intrastate operators will be discontinued. EIA will also publish a table of storage activities summed by the heating and refill seasons, in addition to the existing table summed by calendar year.

The American Gas Association (AGA) publishes natural gas storage estimates weekly. These data are presented by three regions: Eastern Consuming Region, Producing Region, and Western Consuming Region. The State-level storage activities in Table 12 and 13 of the *Natural Gas Monthly* will also be summed by the AGA regions so that data users may readily compare the EIA and AGA data series.

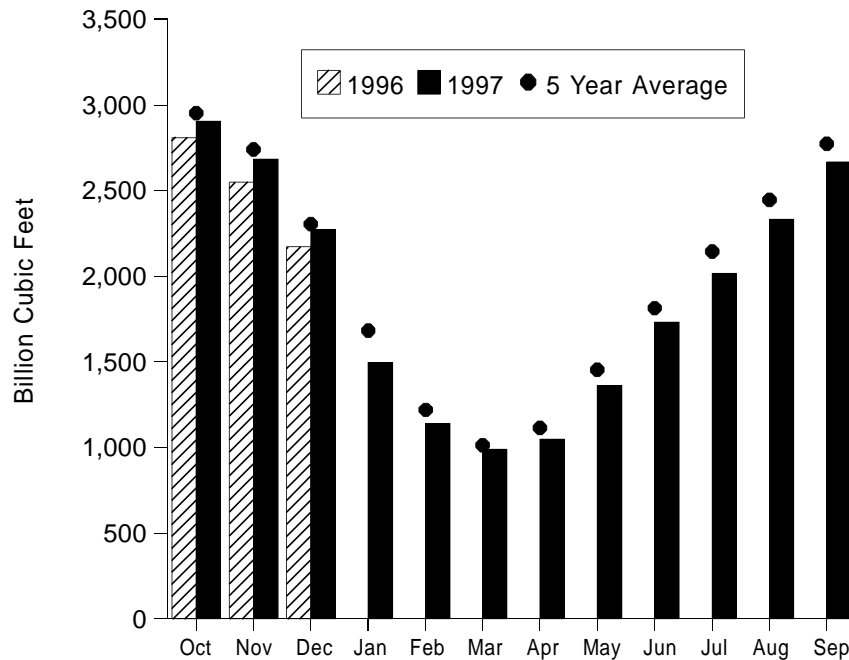


**Figure HI1. Natural Gas Production and Consumption, January-December, 1995-1997**



Source: Table 2.

**Figure HI2. Working Gas in Underground Storage in the United States, 1995-1997**



Note: The 5-year average is calculated using the latest available monthly data. For example, the December average is calculated from December storage levels for 1992 to 1996 while the January average is calculated from January levels for 1993 to 1997. Data are reported as of the end of the month, thus October data represent the beginning of the heating season.

Sources: Form EIA-191, "Underground Natural Gas Storage Report," Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition," and Short-Term Integrated Forecasting System.

Net imports of natural gas, most of which come from Canada, have increased every year in the 1990s, but the rate of increase has declined since 1992. In 1992, net imports were 1,922 billion cubic feet, a 17-percent increase above the 1991 level. By 1997, net imports were just 2 percent above the 1996 level. The lack of pipeline capacity has constrained the growth in imports in recent years, but pipeline expansions and new projects are expected to come online in the fall of 1998 and 1999.

Survey data are now available on storage activities through October 1997 (Table 9). These data show an estimated 2,905 billion cubic feet of working gas in underground storage at the beginning of the 1997-98 heating season (November 1 - March 31), more than 3 percent above the level of a year ago. Projections of net withdrawals for November and December 1997 of 221 and 410 billion cubic feet, respectively, leave 2,274 billion cubic feet of working gas at the end of the year, nearly 5 percent above the level at the end of 1996 (Figure HI2).

## End-Use Consumption

The preliminary estimate of end-use consumption of natural gas in 1997 indicates that the historical record that was broken last year may be exceeded again when data are finalized. It is estimated that 20,107 billion cubic feet of natural gas was consumed by end users in 1997, one-half percent above that of 1996. (Before last year, the previous record had been 19,880 billion cubic feet, set in 1972). Estimates of commercial and industrial consumption in 1997 are close to their levels in 1996, while residential consumption is down by 4 percent (Figure HI3). The estimate of natural gas consumption by electric utilities is only available through September 1997, but this sector has consumed 6 percent more natural gas thus far in 1997 than in 1996.

Residential and commercial consumption of natural gas are estimated to be 5,041 and 3,220 billion cubic feet, respectively, in 1997 (Table 3). Cold weather in the early months of 1996 resulted in more residential use of natural gas for space heating than occurred in 1997. Thus in 1997, residential consumption was 200 billion cubic feet less than in 1996. The 1997 level of commercial consumption is 2 percent above that of 1996.

Industrial consumption of natural gas is estimated to be 8,903 billion cubic feet in 1997, only 0.4 percent higher than in 1996. The industrial sector accounted for 44 percent of all end-use consumption in both 1996 and 1997.

The cumulative estimate of natural gas consumption by electric utilities is 2,339 billion cubic feet through September 1997. This is 6 percent higher than consumption during the same period last year.

The most recent monthly estimate of electric utility consumption is 332 billion cubic feet in September 1997. This level is 16 percent higher than in September 1996. Two events in Texas, which alone accounts for approximately one-third of U.S. natural gas consumption by electric utilities, may be partly responsible for this increase. First, coal delivery problems on the Union Pacific Railroad have continued, causing Texas utilities to burn natural gas in place of coal in an attempt to conserve their coal stocks. Second, hot weather in the Southwest increased the demand for air-conditioning, which in turn increased the demand for electricity. Electricity generation in Texas during September 1997 was almost 20 percent higher than a year ago.<sup>1</sup> The net result is that electric utilities in

Texas consumed an estimated 126 billion cubic feet of natural gas in September 1997, 39 percent more than in September 1996 (Table 17).

## Prices

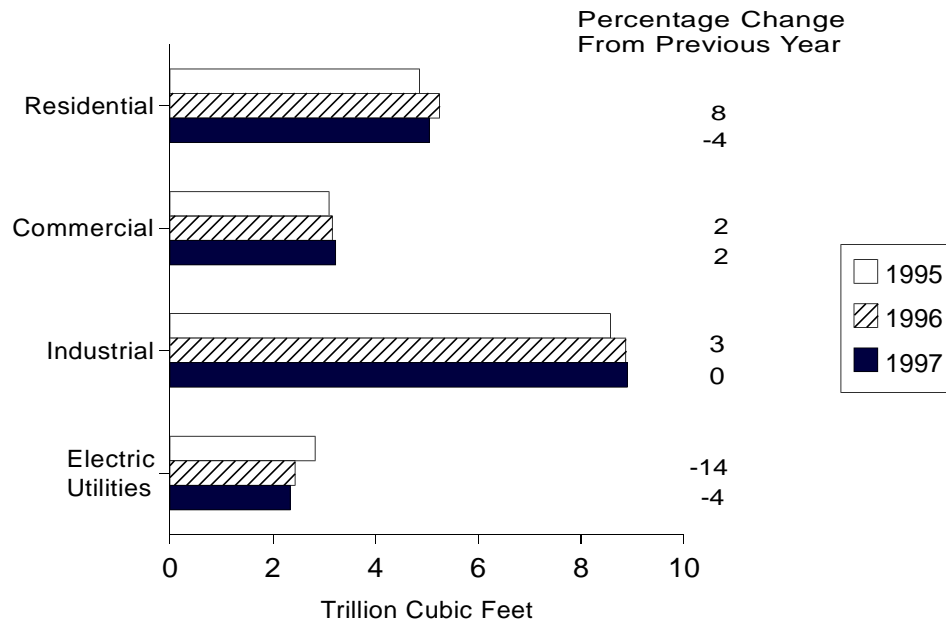
The natural gas wellhead price is estimated to average \$2.44 per thousand cubic feet in September 1997, 10 percent higher than in August (Table 4). This increase is similar to price increases seen in the spot and futures markets during the same month. The accompanying article in this issue presents several factors that may be behind the general rise in prices in the early fall of 1997. Among them is the increased use of natural gas by electric utilities in Texas. The estimated wellhead price in September 1997 is 32 percent above that of September 1996. Cumulatively for 1997, the wellhead price is averaging \$2.31 per thousand cubic feet, 14 percent above the level of a year ago.

September 1997 estimates of average natural gas prices to end users are relatively close to August levels for the residential and commercial sectors, but industrial users saw an average 9-percent price rise compared with August.<sup>2</sup> The average price of natural gas to electric utilities in August 1997, the most recent estimate available, is 4 percent higher than in July. Cumulatively for the year, end-use prices are higher than in 1996 except for the electric utility price, which is 3 percent below last year's level (Figure HI4).

<sup>1</sup>Energy Information Administration, "Natural Gas Weekly Market Update," December 8, 1997, <http://www.eia.doe.gov>.

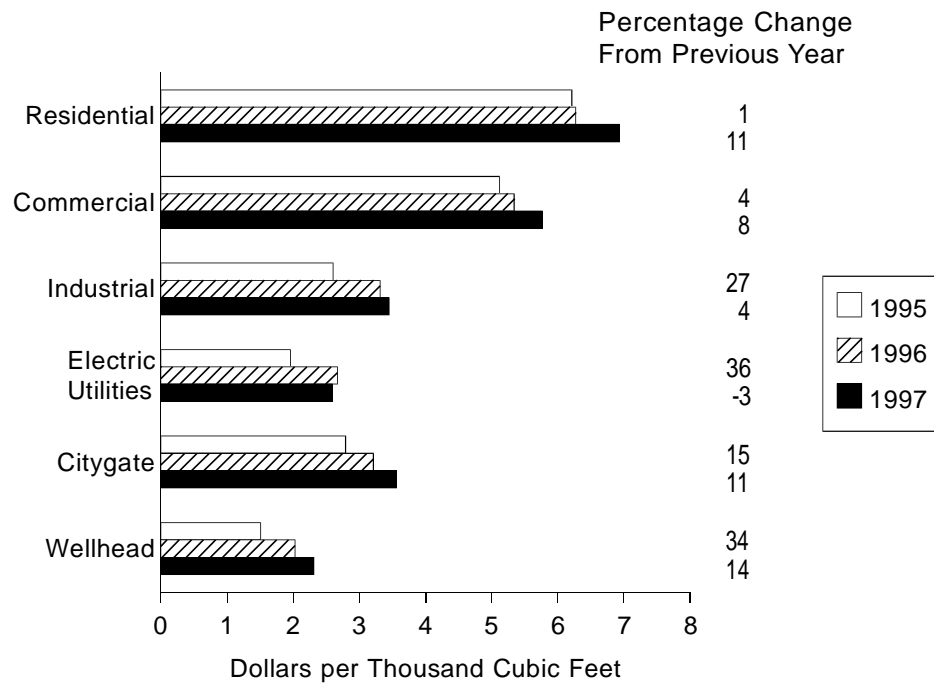
<sup>2</sup>End-use prices in the residential, commercial, and industrial sectors are for onsystem gas sales only. While monthly onsystem sales are nearly 100 percent of residential deliveries, in 1997 they have been from 54 to 73 percent of commercial deliveries and only 13 to 18 percent of industrial deliveries (Table 4).

**Figure HI3. Natural Gas Delivered to Consumers, January-December, 1995-1997**



Note: The reporting of electric utility deliveries is 3 months behind the reporting of other deliveries.  
Source: Table 3.

**Figure HI4. Average Delivered and Wellhead Natural Gas Prices, January-September 1995-1997**



Note: Commercial and industrial average prices reflect onsystem sales only. The reporting of electric utility prices is 1 month behind the reporting of other prices..  
Source: Table 4.

The average price of natural gas paid by residential customers in September 1997 is estimated to be \$8.55 per thousand cubic feet, 7 percent higher than in September 1996. Commercial users paid an estimated \$5.62 per thousand cubic feet for natural gas in September 1997, 3 percent more than the price paid last September.

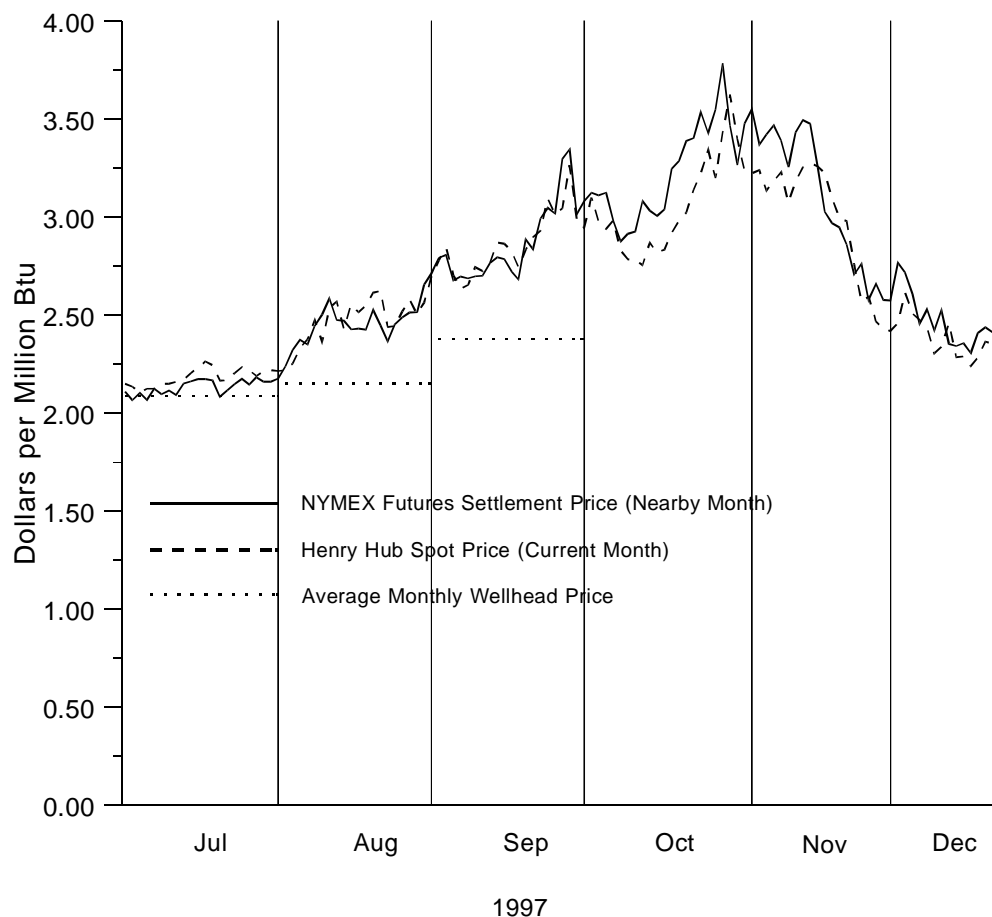
In the industrial sector, the average price of natural gas rose to an estimated \$3.23 per thousand cubic feet in September 1997, exceeding the level of September 1996 by 17 percent. However, the cumulative average price for the year of \$3.45 is only 4 percent above that for the same period in 1996.

Monthly estimates of the average price of natural gas to electric utilities in 1997 have been lower than those of 1996 in every month beginning with February, although

the August estimate is only 1 percent lower than last year. Electric utilities are estimated to have paid \$2.54 per thousand cubic feet for natural gas in August 1997.

The spot and futures price series tracked by this report continued the decline begun in mid-November (Figure HI5). By Monday, December 15, the average spot price at the Henry Hub had fallen to \$2.24 per million Btu, 15 percent lower than the previous high for the month on December 2. Similarly, the futures settlement price on the January 1998 contract at the Henry Hub had fallen to \$2.307 per million Btu by December 15, down 17 percent from the previous high on December 1. Both price series then rose 6 to 7 percent by Friday, December 19. Still, during these middle weeks of December, the January futures contract has traded at \$1.00 to \$2.00 below the levels of a year ago.

**Figure HI5. Futures and Spot Prices at the Henry Hub and Average Wellhead Price**



Note: The futures price is for the contract that is to terminate trading next on the futures market. The spot price is the midpoint of the high and low daily prices at Henry Hub.

Sources: **Futures Prices:** Commodity Futures Trading Commission, Division of Economic Analysis. **Spot Prices:** Pasha Publications, Inc., *Gas Daily*. **Wellhead Prices:** Table 4.

**Table 1. Summary of Natural Gas Production in the United States, 1991-1997**  
(Billion Cubic Feet)

Year and Month	Gross Withdrawals	Repressuring	Nonhydrocarbon Gases Removed <sup>a</sup>	Vented and Flared	Marketed Production (Wet)	Extraction Loss <sup>b</sup>	Dry Gas Production <sup>c</sup>
<b>1991 Total</b> .....	21,750	2,772	276	170	18,532	835	17,698
<b>1992 Total</b> .....	22,132	2,973	280	168	18,712	872	17,840
<b>1993 Total</b> .....	22,726	3,103	414	227	18,982	886	18,095
<b>1994 Total</b> .....	23,581	3,231	412	228	19,710	889	18,821
<b>1995</b>							
January .....	2,043	311	34	21	1,677	78	1,599
February .....	1,822	276	30	20	1,495	70	1,426
March .....	2,026	314	32	20	1,660	77	1,582
April .....	1,945	287	32	21	1,604	75	1,530
May .....	1,997	291	33	24	1,649	77	1,572
June .....	1,910	264	31	28	1,587	74	1,513
July .....	1,960	264	31	26	1,639	76	1,563
August .....	1,965	284	30	22	1,628	76	1,552
September .....	1,914	276	33	25	1,581	74	1,507
October .....	1,988	319	34	25	1,610	75	1,535
November .....	2,045	331	33	24	1,657	77	1,580
December .....	2,128	348	35	26	1,719	80	1,639
<b>Total</b> .....	23,744	3,565	388	284	19,506	908	18,599
<b>1996</b>							
January .....	2,052	310	44	26	1,673	81	1,591
February .....	1,941	294	41	24	1,580	77	1,504
March .....	2,054	313	45	23	1,674	81	1,592
April .....	2,003	289	42	22	1,650	80	1,570
May .....	2,025	281	42	23	1,679	81	1,598
June .....	1,962	276	36	16	1,634	79	1,555
July .....	2,008	271	42	24	1,672	81	1,591
August .....	2,021	281	45	24	1,671	81	1,590
September .....	1,958	283	44	22	1,609	78	1,531
October .....	2,011	306	44	23	1,638	79	1,558
November .....	1,984	299	47	23	1,615	78	1,537
December .....	2,032	307	46	23	1,656	80	1,576
<b>Total</b> .....	24,052	3,510	518	272	19,751	958	18,793
<b>1997</b>							
January .....	<sup>E</sup> 2,082	<sup>E</sup> 327	41	<sup>E</sup> 21	<sup>E</sup> 1,693	79	1,614
February .....	<sup>E</sup> 1,905	<sup>E</sup> 301	38	<sup>E</sup> 19	<sup>E</sup> 1,548	72	1,476
March .....	<sup>E</sup> 2,086	<sup>E</sup> 321	34	<sup>E</sup> 22	<sup>E</sup> 1,708	80	1,629
April .....	<sup>E</sup> 1,974	<sup>E</sup> 296	33	<sup>E</sup> 21	<sup>E</sup> 1,625	76	1,549
May .....	<sup>E</sup> 2,055	<sup>E</sup> 313	<sup>E</sup> 33	<sup>E</sup> 21	<sup>E</sup> 1,688	79	1,609
June .....	<sup>E</sup> 1,962	<sup>E</sup> 294	31	<sup>E</sup> 20	<sup>E</sup> 1,616	75	1,541
July .....	<sup>RE</sup> 2,031	<sup>E</sup> 295	34	<sup>RE</sup> 22	<sup>RE</sup> 1,681	<sup>R</sup> 78	<sup>R</sup> 1,603
August .....	<sup>RE</sup> 2,015	<sup>RE</sup> 283	<sup>RE</sup> 34	<sup>RE</sup> 22	<sup>RE</sup> 1,677	78	<sup>R</sup> 1,599
September .....	<sup>RE</sup> 1,957	<sup>RE</sup> 284	<sup>E</sup> 32	<sup>E</sup> 21	<sup>E</sup> 1,620	<sup>E</sup> 75	<sup>E</sup> 1,545
October .....	<sup>RE</sup> 2,009	<sup>RE</sup> 288	<sup>RE</sup> 33	<sup>RE</sup> 21	<sup>E</sup> 1,666	<sup>RE</sup> 78	<sup>RE</sup> 1,588
<b>November(STIFS)</b> .....	NA	NA	NA	NA	<sup>E</sup> 1,658	<sup>E</sup> 80	<sup>E</sup> 1,578
<b>December(STIFS)</b> .....	NA	NA	NA	NA	<sup>E</sup> 1,717	<sup>E</sup> 84	<sup>E</sup> 1,633
<b>Total</b> .....	NA	NA	NA	NA	<sup>E</sup> 19,897	<sup>E</sup> 934	<sup>E</sup> 18,963

<sup>a</sup> See Appendix A, Explanatory Note 1, for a discussion of data on Nonhydrocarbon Gases Removed.

<sup>b</sup> Extraction loss is only collected on an annual basis. Annually it is between 4 and 5 percent of marketed production. Monthly extraction loss is estimated from monthly marketed production by assuming that the preceding annual percentage remains constant for the next twelve months.

<sup>c</sup> Equal to marketed production (wet) minus extraction loss.

<sup>R</sup> = Revised Data.

<sup>E</sup> = Estimated Data.

<sup>RE</sup> = Revised Estimated Data.

NA = Not Available.

Notes: Data for 1991 through 1996 are final. All other data are preliminary unless otherwise indicated and contain estimates for selected States (see Table 7). Estimates for the most recent two months are derived from the Short-Term Integrated Forecasting System (STIFS). Geographic coverage is the 50 States and the District of Columbia. Totals may not equal sum of components because of independent rounding.

Sources: 1991-1996: Energy Information Administration (EIA), *Natural Gas Annual 1996*. January 1997 through current month: Form EIA-895, "Monthly Quantity of Natural Gas Report," STIFS, and EIA estimates. See Appendix A, Explanatory Notes 1, 3, and 6, for discussion of computation, estimating procedures, and revision policy.

**Table 2. Supply and Disposition of Dry Natural Gas in the United States, 1991-1997**  
(Billion Cubic Feet)

Year and Month	Dry Gas Production	Supplemental Gaseous Fuels <sup>a</sup>	Net Imports	Net Storage Withdrawals <sup>b</sup>	Balancing Item <sup>c</sup>	Consumption <sup>d</sup>
<b>1991 Total</b> .....	17,698	113	1,644	80	-500	19,035
<b>1992 Total</b> .....	17,840	118	1,921	173	-508	19,544
<b>1993 Total</b> .....	18,095	119	2,210	-36	-110	20,279
<b>1994 Total</b> .....	18,821	111	2,462	-286	-400	20,708
<b>1995</b>						
January .....	1,599	12	240	613	-60	2,403
February .....	1,426	10	223	531	17	2,207
March .....	1,582	10	236	228	42	2,098
April .....	1,530	7	220	-51	74	1,780
May .....	1,572	8	216	-343	115	1,567
June .....	1,513	8	202	-380	52	1,395
July .....	1,563	8	208	-313	30	1,497
August .....	1,552	8	223	-212	-24	1,548
September .....	1,507	7	216	-321	-17	1,393
October .....	1,535	9	224	-210	-72	1,486
November .....	1,580	10	224	278	-206	1,886
December .....	1,639	12	256	595	-181	2,321
<b>Total</b> .....	18,599	110	2,687	415	-230	21,581
<b>1996</b>						
January .....	1,591	12	249	723	-2	2,574
February .....	1,504	11	221	462	138	2,335
March .....	1,592	11	226	333	46	2,209
April .....	1,570	9	227	-119	139	1,826
May .....	1,598	6	244	-339	67	1,576
June .....	1,555	8	214	-388	65	1,454
July .....	1,591	8	222	-382	-3	1,436
August .....	1,590	8	221	-358	4	1,465
September .....	1,531	8	227	-379	12	1,399
October .....	1,558	9	236	-210	-62	1,531
November .....	1,537	10	238	272	-161	1,896
December .....	1,576	10	259	387	35	2,266
<b>Total</b> .....	18,793	109	2,784	2	279	21,967
<b>1997</b>						
January .....	1,614	12	<sup>E</sup> 264	683	-55	2,519
February .....	1,476	11	<sup>E</sup> 231	358	<sup>R</sup> 177	<sup>E</sup> 2,253
March .....	1,629	10	<sup>E</sup> 243	156	<sup>R</sup> 53	<sup>E</sup> 2,091
April .....	1,549	9	<sup>E</sup> 221	-59	<sup>R</sup> 63	<sup>E</sup> 1,784
May .....	1,609	9	<sup>E</sup> 229	-322	<sup>R</sup> 66	<sup>E</sup> 1,592
June .....	1,541	7	<sup>E</sup> 226	-366	22	<sup>E</sup> 1,431
July .....	<sup>R</sup> 1,603	8	<sup>E</sup> 222	-274	<sup>R</sup> -23	<sup>E</sup> 1,536
August .....	<sup>R</sup> 1,599	9	<sup>RE</sup> 233	-323	<sup>R</sup> -1	<sup>E</sup> 1,516
September .....	<sup>E</sup> 1,545	<sup>E</sup> 7	<sup>RE</sup> 229	-330	<sup>R</sup> -12	<sup>E</sup> 1,439
October .....	<sup>RE</sup> 1,588	<sup>RE</sup> 9	<sup>RE</sup> 229	<sup>R</sup> -212	<sup>RE</sup> -27	<sup>E</sup> 1,587
<b>November(STIFS)</b> .....	<sup>E</sup> 1,578	<sup>E</sup> 11	<sup>E</sup> 241	<sup>RE</sup> 221	<sup>RE</sup> -120	<sup>RE</sup> 1,931
<b>December(STIFS)</b> .....	<sup>E</sup> 1,633	<sup>E</sup> 12	<sup>E</sup> 265	<sup>E</sup> 410	<sup>E</sup> 74	<sup>E</sup> 2,394
<b>Total</b> .....	<sup>E</sup> 18,963	<sup>E</sup> 116	<sup>E</sup> 2,834	<sup>E</sup> -58	<sup>E</sup> 219	<sup>E</sup> 22,074

<sup>a</sup> Supplemental gaseous fuels data are only collected on an annual basis except for the Dakota Gasification Inc. coal gasification facility which provides data each month. The ratio of annual supplemental fuels (excluding Dakota Gasification Inc.) to the sum of dry gas production, net imports, and net withdrawals from storage is calculated. This ratio, which varies between .0025 and .0037, is applied to the monthly sum of these three elements. The Dakota Gasification Inc. monthly value is added to the result to produce the monthly supplemental fuels estimate.

<sup>b</sup> Monthly and annual data for 1991 through 1996 include underground storage and liquefied natural gas storage. Data for January 1997 forward include underground storage only. See Appendix A, Explanatory Note 7 for discussion of computation procedures.

<sup>c</sup> Represents quantities lost and imbalances in data due to differences among data sources. See Appendix A, Explanatory Note 9, for full discussion.

<sup>d</sup> Consists of pipeline fuel use, lease and plant fuel use, vehicle fuel, and deliveries to consuming sectors as shown in Table 3.

<sup>R</sup> = Revised Data.

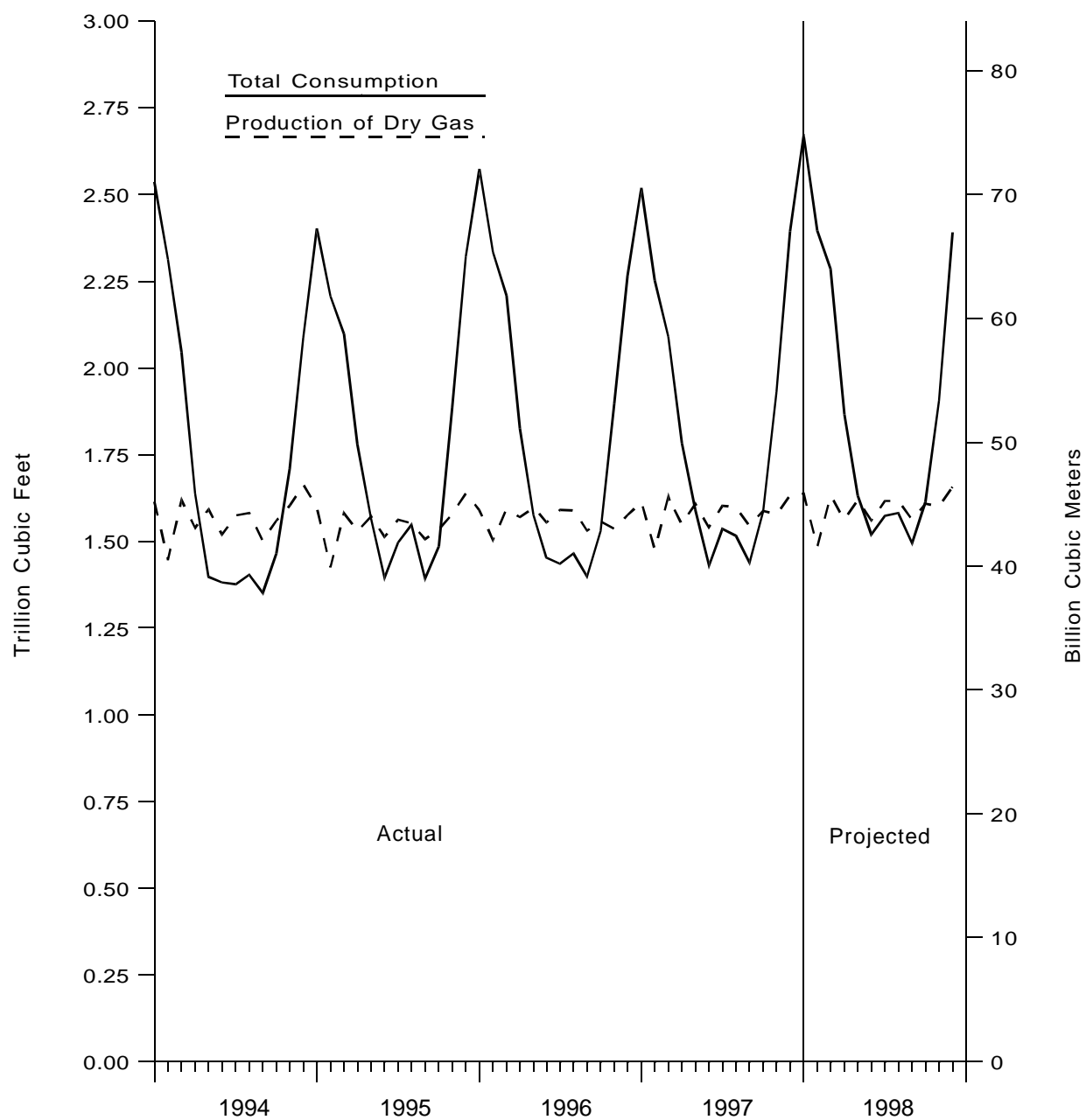
<sup>E</sup> = Estimated Data.

<sup>RE</sup> = Revised Estimated Data.

Notes: Data for 1991 through 1996 are final. All other data are preliminary unless otherwise indicated. Estimates for the most recent two months are derived from the Short-Term Integrated Forecasting System (STIFS). Geographic coverage is the 50 States and the District of Columbia. Totals may not equal sum of components because of independent rounding.

Sources: 1991-1996: Energy Information Administration (EIA), *Natural Gas Annual 1996*, 1994-1995: EIA: Form EIA-627, "Annual Quantity and Value of Natural Gas Report" (1995 data only), Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," Form EIA-191, "Monthly Underground Gas Storage Report," Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas," Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," EIA computations and *Natural Gas Annual 1996*. January 1997 through current month: EIA, Form EIA-895, "Monthly Quantity of Natural Gas Report," Form EIA-857, Form EIA-191, EIA computations, and estimates, Short-Term Integrated Forecasting System (STIFS) computations, and Office of Fossil Energy, U.S. Department of Energy, Natural Gas Imports and Exports. See Appendix A for discussion of computation and estimation procedures and revision policies.

Figure 1. Production and Consumption of Natural Gas in the United States, 1994-1998



Sources: 1994 through the current month: Table 2. Projected data: Energy Information Administration, *Short-Term Energy Outlook* (October 1996).

**Table 3. Natural Gas Consumption in the United States, 1991-1997**  
(Billion Cubic Feet)

Year and Month	Lease and Plant Fuel <sup>a</sup>	Pipeline Fuel <sup>b</sup>	Delivered to Consumers					Total Consumption
			Residential	Commercial	Industrial	Electric Utilities	Total	
<b>1991 Total</b> .....	1,129	601	4,556	<sup>c</sup> 2,729	7,231	2,789	17,305	19,035
<b>1992 Total</b> .....	1,171	588	4,690	<sup>c</sup> 2,803	7,527	2,766	17,786	19,544
<b>1993 Total</b> .....	1,172	624	4,956	<sup>c</sup> 2,863	7,981	2,682	18,483	20,279
<b>1994 Total</b> .....	1,124	685	4,848	<sup>c</sup> 2,897	8,167	2,987	18,899	20,708
<b>1995</b>								
January .....	105	79	816	427	777	199	2,218	2,403
February .....	94	73	754	411	707	168	2,040	2,207
March .....	104	69	600	342	738	245	1,926	2,098
April .....	100	58	419	254	720	229	1,622	1,780
May .....	103	50	260	184	711	258	1,414	1,567
June .....	99	45	159	133	663	297	1,252	1,395
July .....	101	48	131	133	677	407	1,347	1,497
August .....	101	50	114	130	684	468	1,397	1,548
September .....	99	45	134	130	670	316	1,250	1,393
October .....	102	48	216	171	709	240	1,336	1,486
November .....	105	61	489	297	736	198	1,720	1,886
December .....	109	76	758	420	786	172	2,136	2,321
<b>Total</b> .....	1,220	700	4,850	<sup>c</sup> 3,034	8,580	3,197	19,660	21,581
<b>1996</b>								
January .....	106	85	934	480	800	168	2,382	2,574
February .....	101	77	831	443	747	137	2,158	2,335
March .....	106	72	705	387	781	156	2,030	2,209
April .....	104	59	474	284	736	170	1,663	1,826
May .....	106	50	271	183	701	264	1,420	1,576
June .....	102	46	162	133	710	299	1,305	1,454
July .....	105	46	124	126	677	358	1,285	1,436
August .....	105	47	118	123	704	367	1,312	1,465
September .....	102	45	138	124	706	285	1,253	1,399
October .....	104	49	243	171	737	226	1,378	1,531
November .....	103	62	503	295	764	170	1,732	1,896
December .....	105	74	738	409	807	132	2,086	2,266
<b>Total</b> .....	1,250	711	5,241	<sup>c</sup> 3,161	8,870	2,732	20,006	21,967
<b>1997</b>								
January .....	106	82	<sup>R</sup> 908	<sup>R</sup> 480	<sup>R</sup> 804	139	<sup>R</sup> 2,331	2,519
February .....	97	73	<sup>R</sup> 766	427	747	143	<sup>R</sup> 2,083	<sup>R</sup> 2,253
March .....	107	68	604	359	<sup>R</sup> 764	189	<sup>R</sup> 1,917	<sup>R</sup> 2,091
April .....	102	58	434	<sup>R</sup> 267	<sup>R</sup> 731	193	<sup>R</sup> 1,625	<sup>R</sup> 1,784
May .....	106	52	<sup>R</sup> 285	<sup>R</sup> 206	713	231	<sup>R</sup> 1,435	<sup>R</sup> 1,592
June .....	101	46	<sup>R</sup> 161	147	680	295	<sup>R</sup> 1,283	<sup>R</sup> 1,431
July .....	<sup>R</sup> 105	50	131	<sup>R</sup> 133	691	427	<sup>R</sup> 1,381	<sup>R</sup> 1,536
August .....	105	49	119	134	<sup>R</sup> 718	390	<sup>R</sup> 1,362	<sup>R</sup> 1,516
September .....	<sup>R</sup> 101	<sup>R</sup> 47	<sup>R</sup> 132	<sup>R</sup> 140	<sup>R</sup> 687	<sup>R</sup> 332	<sup>R</sup> 1,291	<sup>R</sup> 1,439
October .....	104	<sup>E</sup> 53	<sup>E</sup> 250	<sup>E</sup> 184	<sup>E</sup> 765	NA	<sup>E</sup> 1,430	<sup>E</sup> 1,587
November .....	<sup>E</sup> 103	<sup>E</sup> 63	<sup>RE</sup> 495	<sup>RE</sup> 309	<sup>E</sup> 775	NA	<sup>RE</sup> 1,765	<sup>RE</sup> 1,931
December .....	<sup>E</sup> 113	<sup>E</sup> 77	<sup>E</sup> 756	<sup>E</sup> 434	<sup>E</sup> 827	NA	<sup>E</sup> 2,204	<sup>E</sup> 2,394
<b>Total</b> .....	<sup>E</sup> 1,250	<sup>E</sup> 717	<sup>E</sup> 5,041	<sup>E</sup> 3,220	<sup>E</sup> 8,903	NA	<sup>E</sup> 20,107	<sup>E</sup> 22,074

<sup>a</sup> Plant fuel data are only collected on an annual basis and monthly lease fuel data are only collected annually. Lease and plant fuel estimates have been between 6 and 7 percent of marketed production annually. Monthly lease and plant fuel use is estimated from monthly marketed production by assuming that the preceding annual percentage remains constant for the next twelve months.

<sup>b</sup> Pipeline fuel use is only collected on an annual basis. Annually it is between 3 and 4 percent of total consumption. Monthly pipeline fuel data are estimated from monthly total consumption (excluding pipeline fuel) by assuming that the preceding annual percentage remains constant for the next twelve months.

<sup>c</sup> Vehicle fuel deliveries, in billion cubic feet, were 0.4 in 1991, 0.5 in 1992, 1.0 in 1993, 1.7 in 1994, 2.7 in 1995 and 2.9 in 1996.

<sup>R</sup> = Revised Data.

<sup>E</sup> = Estimated Data.

<sup>RE</sup> = Revised Estimated Data.

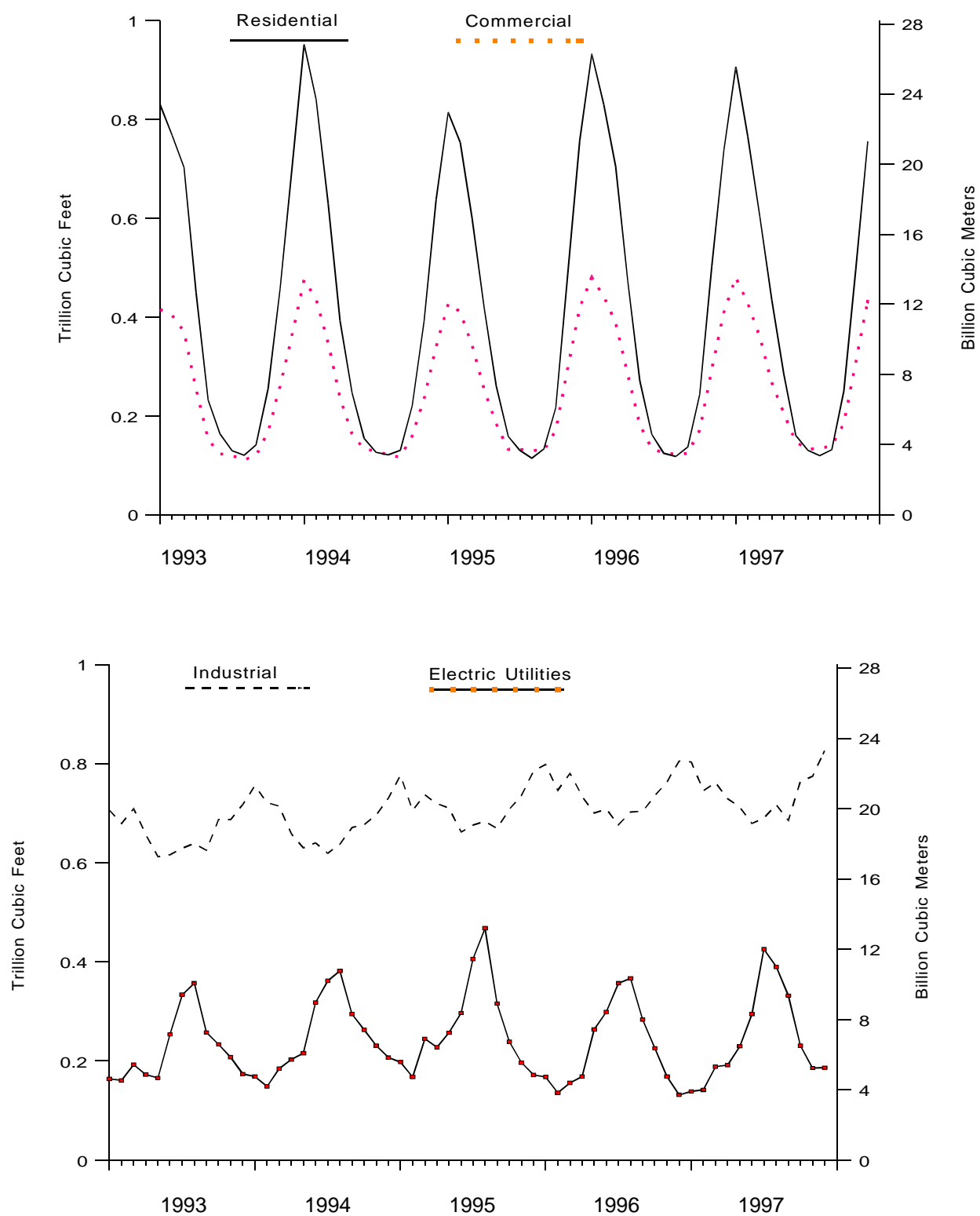
NA = Not Available.

Notes: Data for 1991 through 1996 are final. All other data are preliminary unless otherwise indicated. Estimates for the most recent three months are derived from the Short-Term Integrated Forecasting System (STIFS). Geographic coverage is the 50 States and the District of Columbia. Totals may not equal sum of components because of independent rounding. In 1996, consumption of natural gas for agricultural use is classified as industrial use. In 1995 and earlier years, agricultural use was classified as commercial use. See Explanatory Note 5 for further explanation.

Sources: 1991-1996: Energy Information Administration (EIA): Form EIA-627, "Annual Quantity and Value of Natural Gas Report," (thru 1994), Form EIA-895 "Monthly Quantity of Natural Gas Report," (1995 forward), Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," Form EIA-759, "Monthly Power Plant Report," EIA computations, and *Natural Gas Annual 1996*. January 1997 through the current month: EIA: Form 895, "Monthly Quantity of Natural Gas Report," Form EIA-857, Form EIA-759, and STIFS computations. See Appendix A, Explanatory Note 5, for computation procedures and revision policy.



**Figure 2. Natural Gas Deliveries to Consumers in the United States, 1993-1997**



Sources: *Natural Gas Annual*, Form EIA-857, and Form EIA-759.

**Table 4. Selected National Average Natural Gas Prices, 1991-1997**  
(Dollars per Thousand Cubic Feet)

Year and Month	Wellhead Price <sup>a</sup>	City Gate Price	Delivered to Consumers					Electric Utilities Price
			Residential Price	Commercial		Industrial		
				Price	% of Total <sup>b</sup>	Price	% of Total <sup>b</sup>	
1991 Annual Average .....	1.64	2.90	5.82	4.81	85.1	2.69	32.7	2.18
1992 Annual Average .....	1.74	3.01	5.89	4.88	83.2	2.84	30.3	2.36
1993 Annual Average .....	2.04	3.21	6.16	5.22	83.9	3.07	29.7	2.61
1994 Annual Average .....	1.85	3.07	6.41	5.44	79.3	3.05	25.5	2.28
1995								
January .....	1.62	2.79	5.85	5.23	81.6	2.95	27.3	2.13
February .....	1.48	2.71	5.76	5.14	81.7	2.85	27.4	2.00
March .....	1.47	2.74	5.84	5.12	81.2	2.74	26.5	1.92
April .....	1.52	2.72	6.06	5.08	77.2	2.57	25.4	1.97
May .....	1.55	2.80	6.54	5.04	71.8	2.54	23.6	2.06
June .....	1.58	2.89	7.49	5.16	71.4	2.44	24.5	2.06
July .....	1.43	2.89	7.82	5.03	67.3	2.34	22.2	1.90
August .....	1.43	2.87	8.13	4.99	66.6	2.26	21.8	1.84
September .....	1.52	2.89	7.73	4.98	67.9	2.42	22.0	1.95
October .....	1.54	2.83	6.62	4.82	69.7	2.44	22.5	2.09
November .....	1.61	2.67	5.61	4.77	75.6	2.68	24.7	2.22
December .....	1.84	2.83	5.54	5.00	79.2	3.07	25.0	2.58
Annual Average .....	1.55	2.78	6.06	5.05	76.7	2.71	24.5	2.02
1996								
January .....	2.05	3.14	5.64	5.29	83.4	3.61	23.1	2.87
February .....	1.89	3.16	5.82	5.25	83.8	3.61	23.6	3.07
March .....	1.95	3.17	5.93	5.36	81.7	3.52	23.3	2.73
April .....	2.08	3.22	6.27	5.34	79.3	3.42	21.4	2.68
May .....	2.01	3.18	6.84	5.40	73.9	3.14	19.6	2.52
June .....	2.08	3.41	7.83	5.43	69.3	3.13	17.6	2.59
July .....	2.25	3.49	8.64	5.46	67.3	3.17	19.1	2.69
August .....	2.10	3.46	8.73	5.56	65.9	3.05	18.1	2.57
September .....	1.85	3.05	7.99	5.46	66.9	2.77	17.6	2.24
October .....	1.94	2.94	7.05	5.33	68.8	2.89	18.1	2.37
November .....	2.50	3.46	6.37	5.40	76.1	3.57	19.0	3.04
December .....	3.26	4.18	6.47	5.78	78.4	4.20	20.7	3.98
Annual Average .....	2.17	3.34	6.34	5.40	77.6	3.42	20.2	2.69
1997								
January .....	<sup>E</sup> 3.66	4.27	<sup>R</sup> 6.71	<sup>R</sup> 6.08	72.6	4.60	<sup>R</sup> 18.4	4.04
February .....	<sup>E</sup> 2.60	3.78	<sup>R</sup> 6.75	5.97	72.2	<sup>R</sup> 4.19	16.7	2.98
March .....	<sup>E</sup> 1.72	3.06	6.49	5.69	<sup>R</sup> 68.8	<sup>R</sup> 3.39	16.3	2.30
April .....	<sup>E</sup> 1.82	2.90	<sup>R</sup> 6.53	5.44	<sup>R</sup> 66.5	3.01	16.0	2.30
May .....	<sup>E</sup> 2.04	3.16	<sup>R</sup> 6.80	5.39	59.7	2.95	15.6	2.41
June .....	<sup>E</sup> 2.18	<sup>R</sup> 3.44	<sup>R</sup> 8.12	<sup>R</sup> 5.66	<sup>R</sup> 57.1	<sup>R</sup> 3.10	15.2	2.52
July .....	<sup>RE</sup> 2.15	<sup>R</sup> 3.61	<sup>R</sup> 8.46	5.56	<sup>R</sup> 55.3	<sup>R</sup> 2.96	<sup>R</sup> 13.4	2.44
August .....	<sup>E</sup> 2.21	<sup>R</sup> 3.44	<sup>R</sup> 8.70	5.48	53.8	2.96	<sup>R</sup> 12.9	2.54
September .....	<sup>E</sup> 2.44	3.61	8.55	5.62	54.3	3.23	13.0	<sup>NA</sup>
1997 YTD <sup>c</sup> .....	<sup>E</sup> 2.31	3.56	6.93	5.76	65.9	3.45	15.4	2.59
1996 YTD .....	2.03	3.21	6.27	5.34	78.4	3.31	19.6	2.67
1995 YTD .....	1.51	2.79	6.21	5.12	76.9	2.60	24.2	1.96

<sup>a</sup> See Appendix A, Explanatory Note 8, of the *Natural Gas Monthly (NGM)* for discussion of wellhead prices.

<sup>b</sup> Percentage of total deliveries represented by onsystem sales, see Figure 6. See Table 24 for breakdown by State.

<sup>c</sup> Year-to-date price represents months for which price information is available in the current year.

<sup>R</sup> = Revised Data.

<sup>E</sup> = Estimated Data.

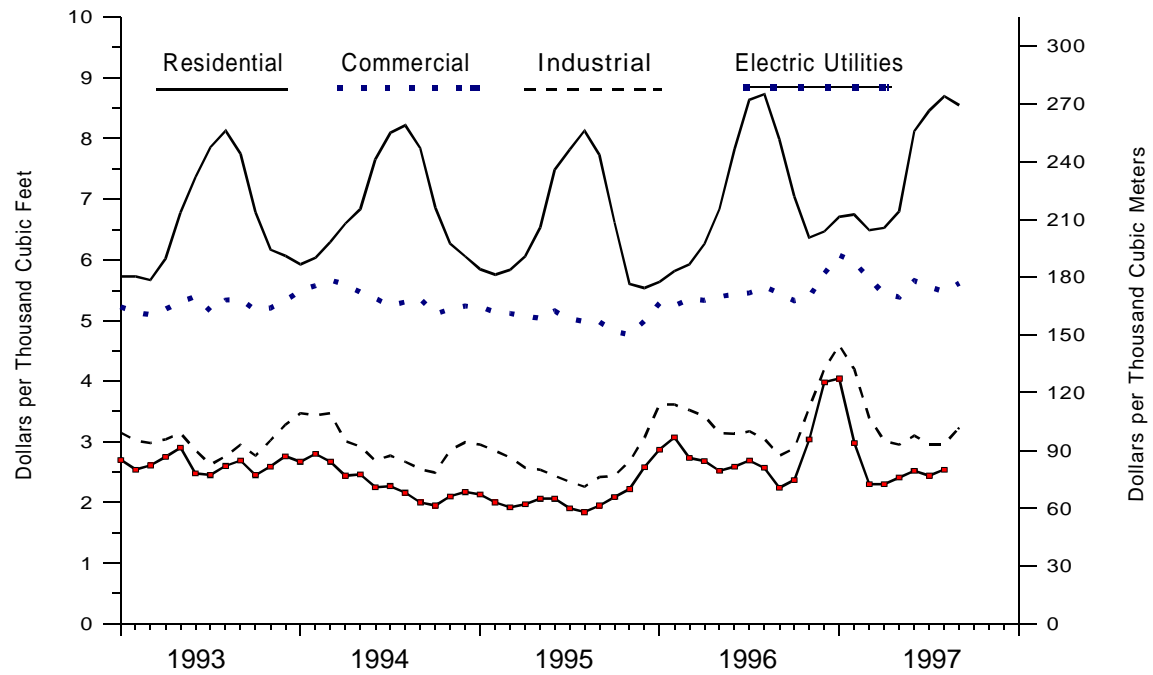
<sup>RE</sup> = Revised Estimated Data.

NA = Not Available.

Notes: Data for 1991 through 1996 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. In 1996, consumption of natural gas for agricultural use is classified as industrial use. In 1995 and earlier years, agricultural use was classified as commercial use. See Explanatory Note 5 for further explanation.

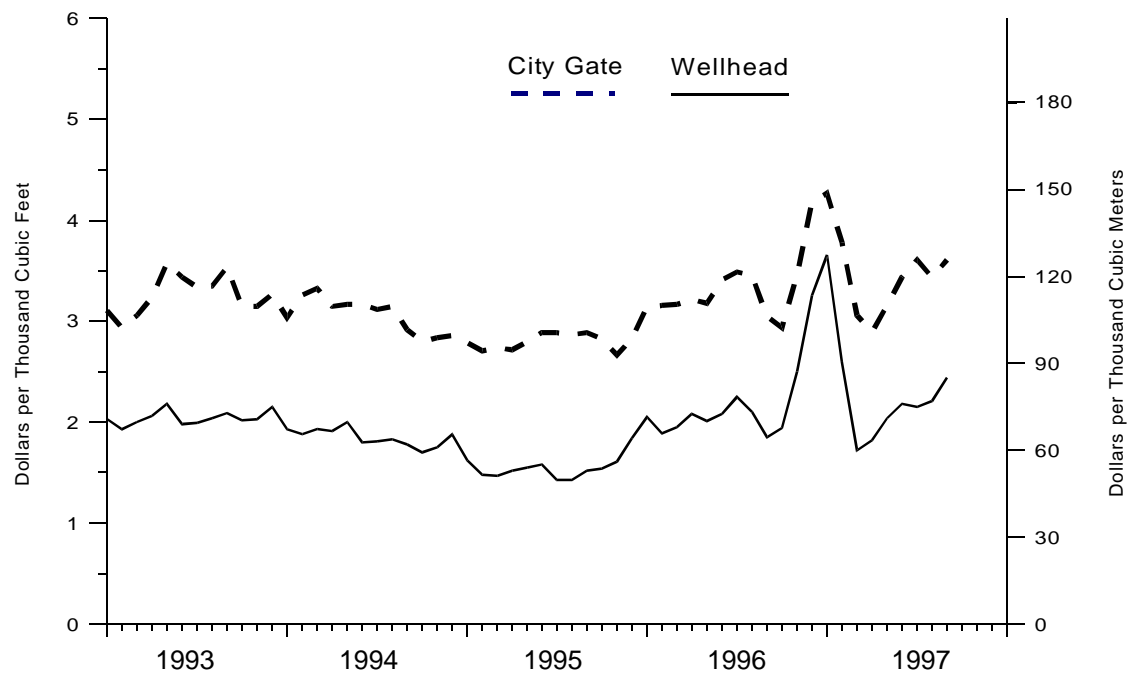
Sources: 1990-1996: Energy Information Administration (EIA) *Natural Gas Annual 1996*. 1997 forward: EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," and EIA estimates. January 1997 through current month: See Appendix A, Explanatory Note 8 for estimation procedures and revision policy.

**Figure 3. Average Price of Natural Gas Delivered to Consumers in the United States, 1993-1997**



Source: Table 4.

**Figure 4. Average Price of Natural Gas in the United States, 1993-1997**



Source: Table 4.

**Table 5. U.S. Natural Gas Imports, by Country, 1991-1997**  
(Volumes in Million Cubic Feet, Prices in Dollars per Thousand Cubic Feet)

Year and Month	Pipeline				LNG				Total	
	Canada		Mexico		Algeria		Other		Volume	Average Price
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price		
<b>1991 Total</b> .....	1,709,716	1.81	—	—	63,596	2.36	—	—	1,773,313	1.83
<b>1992 Total</b> .....	2,094,387	1.84	—	—	43,116	2.54	—	—	2,137,504	1.85
<b>1993 Total</b> .....	2,266,751	2.02	1,678	1.94	81,685	2.20	—	—	2,350,115	2.03
<b>1994 Total</b> .....	2,566,049	1.86	7,013	1.99	50,778	2.28	—	—	2,623,839	1.87
<b>1995</b>										
January .....	250,666	1.59	158	1.38	2,511	2.40	—	—	253,335	1.60
February .....	233,404	1.45	0	—	2,573	1.81	—	—	235,977	1.46
March .....	247,578	1.39	150	1.50	2,621	2.45	—	—	250,349	1.40
April .....	231,745	1.37	0	—	0	—	—	—	231,745	1.37
May .....	225,682	1.45	0	—	2,576	1.89	—	—	228,259	1.46
June .....	217,456	1.47	0	—	0	—	—	—	217,456	1.47
July .....	222,652	1.40	0	—	0	—	—	—	222,652	1.40
August .....	233,419	1.33	824	1.53	2,648	2.42	—	—	236,891	1.34
September .....	223,836	1.43	3,872	1.53	0	—	—	—	227,708	1.43
October .....	234,284	1.48	1,718	1.56	0	—	—	—	236,003	1.48
November .....	233,857	1.60	0	—	2,487	2.47	—	—	236,344	1.61
December .....	261,828	1.79	0	—	2,502	2.65	—	—	264,329	1.80
<b>Total</b> .....	2,816,408	1.48	6,722	1.53	17,918	2.30	—	—	2,841,048	1.49
<b>1996</b>										
January .....	259,656	2.08	1,499	2.03	2,460	2.81	—	—	263,615	2.09
February .....	230,546	1.94	698	2.14	2,512	2.79	—	—	233,756	1.95
March .....	237,668	1.91	1,259	2.34	2,599	3.06	—	—	241,526	1.92
April .....	230,928	1.86	1,369	2.18	4,559	2.43	—	—	236,857	1.87
May .....	245,522	1.70	4,024	2.14	2,612	2.58	—	—	252,158	1.72
June .....	225,875	1.70	711	2.35	0	—	—	—	226,587	1.70
July .....	232,908	1.82	1,313	2.58	2,642	3.00	—	—	236,864	1.84
August .....	235,199	1.80	30	1.70	2,629	2.56	—	—	237,858	1.80
September .....	234,206	1.60	770	1.69	0	—	<sup>a</sup> 2,524	3.34	237,500	1.62
October .....	241,294	1.68	1,110	2.37	5,116	2.96	—	—	247,520	1.71
November .....	245,795	2.25	982	2.85	5,031	2.59	—	—	251,807	2.26
December .....	263,681	3.00	96	3.30	5,164	2.51	<sup>a</sup> 2,425	3.57	271,366	3.00
<b>Total</b> .....	2,883,277	1.96	13,862	2.25	35,325	2.70	4,949	3.45	2,937,413	1.97
<b>1997</b>										
January .....	264,919	2.93	1,375	3.08	7,560	2.78	<sup>a</sup> 2,417	3.68	276,271	2.93
February .....	233,569	2.49	2,248	2.44	7,667	3.00	—	—	243,484	2.51
March .....	254,416	2.10	2,737	1.84	2,530	2.98	—	—	259,683	2.11
April .....	232,114	1.72	189	1.92	2,557	2.23	—	—	234,860	1.72
May .....	232,065	1.82	2,382	2.03	2,552	2.20	<sup>b</sup> 2,455	2.59	239,455	1.83
June .....	228,505	1.82	1,694	2.21	5,059	2.48	—	—	235,258	1.83
July .....	225,528	NA	<sup>E</sup> 817	NA	5,026	NA	—	—	<sup>E</sup> 231,371	NA
August .....	<sup>R</sup> 241,036	NA	<sup>E</sup> 0	NA	7,535	NA	—	—	<sup>RE</sup> 248,572	NA
September .....	<sup>RE</sup> 233,000	NA	<sup>E</sup> 29	NA	5,030	NA	<sup>b</sup> 2,337	NA	<sup>RE</sup> 240,396	NA
October .....	<sup>E</sup> 235,432	NA	<sup>E</sup> 1,000	NA	5,050	NA	—	—	<sup>E</sup> 241,483	NA
<b>1997 YTD</b> .....	<sup>E</sup> 2,380,585	NA	<sup>E</sup> 12,472	NA	50,567	NA	7,210	NA	<sup>E</sup> 2,450,833	NA
<b>1996 YTD</b> .....	2,373,801	1.81	12,784	2.20	25,131	NA	2,524	3.34	2,414,240	1.82
<b>1995 YTD</b> .....	2,320,724	1.44	6,722	1.53	12,929	2.20	—	—	2,340,375	1.44

<sup>a</sup> Received from the United Arab Emirates.

<sup>b</sup> Received from Australia.

<sup>R</sup> = Revised Data.

<sup>E</sup> = Estimated Data.

<sup>RE</sup> = Revised Estimated Data.

NA = Not Available.

— = Not Applicable.

Sources: 1991-1994: Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." January 1995 through the current month (except estimates): Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*. Estimated pipeline data (shown with an "E") are taken from data from the National Energy Board of Canada plus EIA estimates. LNG data: Industry reports.

**Table 6. U.S. Natural Gas Exports, by Country, 1991-1997**  
(Volumes in Million Cubic Feet, Prices in Dollars per Thousand Cubic Feet)

Year and Month	Pipeline				LNG		Total	
	Canada		Mexico		Japan		Volume	Average Price
	Volume	Average Price	Volume	Average Price	Volume	Average Price		
<b>1991 Total</b> .....	14,791	1.91	60,448	1.76	54,005	3.71	129,244	2.59
<b>1992 Total</b> .....	67,777	1.83	95,973	1.90	52,532	3.43	216,282	2.25
<b>1993 Total</b> .....	44,518	2.14	39,676	2.02	55,989	3.34	140,183	2.59
<b>1994 Total</b> .....	52,556	2.42	46,500	1.68	62,682	3.18	161,738	2.50
<b>1995</b>								
January .....	2,518	2.00	5,576	1.54	5,541	3.35	13,635	2.36
February .....	2,016	2.02	5,542	1.32	5,557	3.38	13,115	2.30
March .....	2,387	1.92	6,670	1.36	5,573	3.39	14,630	2.22
April .....	2,457	1.84	5,941	1.49	3,741	3.47	12,138	2.17
May .....	1,931	2.01	6,848	1.58	3,698	3.54	12,477	2.23
June .....	2,106	1.91	7,945	1.59	5,556	3.59	15,606	2.34
July .....	2,446	1.82	6,526	1.39	5,581	3.58	14,552	2.30
August .....	2,558	1.77	3,431	1.29	7,531	3.47	13,520	2.60
September .....	3,336	2.03	2,378	1.47	5,656	3.36	11,370	2.58
October .....	2,929	1.91	5,588	1.63	3,733	3.30	12,250	2.21
November .....	1,627	2.21	3,535	1.65	7,518	3.29	12,679	2.69
December .....	1,244	2.43	1,303	1.82	5,599	3.31	8,146	2.94
<b>Total</b> .....	27,554	1.96	61,283	1.50	65,283	3.41	154,119	2.39
<b>1996</b>								
January .....	7,044	3.13	1,607	1.98	5,534	3.38	14,186	3.10
February .....	5,207	2.71	2,000	1.82	5,621	3.35	12,828	2.85
March .....	6,616	2.79	2,860	1.81	5,642	3.55	15,118	2.88
April .....	2,430	2.21	1,924	1.69	5,654	3.57	10,008	2.88
May .....	2,809	2.15	1,899	1.84	3,750	3.61	8,458	2.73
June .....	3,001	2.25	3,486	2.16	5,651	3.65	12,138	2.87
July .....	3,777	2.45	3,062	2.24	7,546	3.66	14,385	3.04
August .....	2,197	2.30	9,176	2.11	5,663	3.67	17,036	2.65
September .....	2,514	1.94	2,389	1.73	5,663	3.73	10,566	2.85
October .....	4,311	1.97	1,990	1.85	5,589	3.84	11,889	2.83
November .....	6,776	2.77	1,533	2.56	5,670	4.01	13,979	3.25
December .....	5,222	3.67	1,914	3.72	5,665	3.73	12,801	3.70
<b>Total</b> .....	51,905	2.67	33,840	2.11	67,648	3.65	153,393	2.97
<b>1997</b>								
January .....	4,193	4.08	2,220	4.07	5,604	4.25	12,017	4.16
February .....	5,169	3.02	1,666	2.32	5,596	4.29	12,431	3.50
March .....	9,117	2.06	1,493	1.55	5,675	4.22	16,285	2.76
April .....	5,167	1.78	3,046	1.83	5,660	4.06	13,873	2.72
May .....	4,108	2.09	2,177	1.96	3,812	3.98	10,097	2.77
June .....	3,162	2.28	2,579	2.14	3,786	4.22	9,527	3.01
July .....	<sup>E</sup> 2,581	NA	<sup>E</sup> 2,931	NA	3,756	NA	<sup>E</sup> 9,268	NA
August .....	<sup>E</sup> 2,500	NA	<sup>E</sup> 5,708	NA	7,532	NA	<sup>E</sup> 15,740	NA
September .....	<sup>E</sup> 2,500	NA	<sup>E</sup> 5,488	NA	3,767	NA	<sup>RE</sup> 11,756	NA
October .....	<sup>E</sup> 2,500	NA	<sup>E</sup> 4,000	NA	5,675	NA	<sup>E</sup> 12,175	NA
<b>1997 YTD</b> .....	<sup>E</sup> 40,997	NA	<sup>E</sup> 31,309	NA	50,865	NA	<sup>E</sup> 123,170	NA
<b>1996 YTD</b> .....	39,906	2.52	30,393	1.98	56,313	3.60	126,613	2.87
<b>1995 YTD</b> .....	24,683	1.92	56,445	1.48	52,166	3.44	133,294	2.33

<sup>E</sup> = Estimated Data.  
<sup>RE</sup> = Revised Estimated Data.  
NA = Not Available.

Sources: 1991-1994: Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." January 1995 through the current month (except estimates): Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*. Estimated pipeline data (shown with an "E") are taken from data from the National Energy Board of Canada plus EIA estimates. LNG data: Industry reports.

**Table 7. Marketed Production of Natural Gas, by State, 1991-1997**  
(Million Cubic Feet)

Year and Month	Alabama <sup>b</sup>	Alaska	Arizona	California	Colorado	Florida	Kansas
<b>1991 Total</b> .....	170,847	437,822	1,225	378,384	285,961	4,884	628,459
<b>1992 Total</b> .....	355,099	443,597	771	365,632	323,041	6,657	658,007
<b>1993 Total</b> .....	388,024	430,350	597	315,851	400,985	7,085	686,347
<b>1994 Total</b> .....	515,272	555,402	752	309,427	453,207	7,486	712,730
<b>1995</b>							
January .....	43,456	43,391	43	24,674	47,253	559	64,211
February .....	39,652	38,966	40	22,028	41,958	570	60,635
March .....	43,734	43,037	43	23,829	45,291	598	59,382
April .....	42,727	39,714	42	22,819	45,021	578	59,555
May .....	44,169	39,308	44	23,055	45,187	604	61,639
June .....	42,737	35,781	40	22,145	42,589	535	58,686
July .....	45,521	36,246	50	22,545	43,042	537	59,830
August .....	45,244	35,724	58	22,584	43,105	502	58,451
September .....	37,523	36,488	53	22,276	41,295	508	53,756
October .....	45,123	39,695	52	24,100	45,563	475	58,743
November .....	44,954	39,324	48	24,188	45,440	497	60,691
December .....	44,820	41,874	44	25,312	37,338	502	65,856
<b>Total</b> .....	519,661	469,550	558	279,555	523,084	6,463	721,436
<b>1996</b>							
January .....	45,653	44,655	41	20,714	48,619	518	62,976
February .....	42,668	40,433	42	22,910	45,504	493	62,683
March .....	45,334	43,738	45	24,686	47,843	460	63,027
April .....	43,868	39,694	36	23,988	45,293	456	60,858
May .....	45,160	36,348	39	24,091	46,893	483	62,194
June .....	43,319	37,334	45	23,281	45,212	503	56,318
July .....	43,257	37,272	30	24,495	45,570	500	57,095
August .....	43,873	37,239	43	24,547	51,269	540	55,144
September .....	42,834	38,039	31	23,826	45,437	537	55,563
October .....	42,200	41,204	34	24,261	50,245	468	57,589
November .....	45,395	40,706	37	24,493	49,824	517	58,460
December .....	47,278	44,166	40	25,203	50,363	531	60,890
<b>Total</b> .....	530,841	480,828	463	286,494	572,071	6,006	712,796
<b>1997</b>							
January .....	32,136	45,409	46	24,427	47,843	525	60,197
February .....	29,307	40,017	41	23,877	47,967	510	54,234
March .....	32,291	43,559	42	23,879	52,372	607	60,099
April .....	32,077	<sup>E</sup> 39,267	39	23,223	48,571	552	57,085
May .....	31,326	35,821	36	23,690	48,444	538	61,661
June .....	30,137	37,634	28	23,507	44,744	448	57,731
July .....	31,331	35,680	31	23,981	50,319	512	56,193
August .....	30,487	36,425	30	23,831	52,235	503	<sup>E</sup> 54,372
<b>1997 YTD</b> .....	249,092	<sup>E</sup> 313,811	293	190,415	392,496	4,195	<sup>E</sup> 461,574
<b>1996 YTD</b> .....	353,134	316,713	321	188,712	376,203	3,952	480,293
<b>1995 YTD</b> .....	347,241	312,168	361	183,677	353,447	4,481	482,390

See footnotes at end of table.

**Table 7. Marketed Production of Natural Gas, by State, 1991-1997**

(Million Cubic Feet) — Continued

Year and Month	Louisiana <sup>c</sup>	Michigan	Mississippi	Montana	New Mexico	North Dakota	Oklahoma
<b>1991 Total</b> .....	5,034,361	195,749	108,031	51,999	1,038,284	53,479	2,153,852
<b>1992 Total</b> .....	4,914,300	194,815	91,697	53,867	1,268,863	54,883	2,017,356
<b>1993 Total</b> .....	4,991,138	204,635	80,695	54,528	1,409,429	59,851	2,049,942
<b>1994 Total</b> .....	5,169,705	222,657	63,448	50,416	1,557,689	57,805	1,934,864
<b>1995</b>							
January .....	437,237	22,536	7,664	4,919	134,508	4,284	160,707
February .....	386,483	7,882	6,874	4,278	125,334	3,933	143,517
March .....	417,303	31,418	7,651	4,716	136,983	4,410	154,640
April .....	411,156	17,507	7,408	4,381	131,657	4,111	148,305
May .....	432,964	19,427	8,138	4,153	137,827	4,313	149,369
June .....	412,412	25,052	7,836	3,420	130,688	4,186	143,346
July .....	432,943	23,349	7,959	3,493	132,372	3,615	145,565
August .....	420,784	19,129	8,685	3,570	138,073	4,128	145,609
September .....	422,232	21,698	8,783	3,734	134,030	4,129	143,565
October .....	401,813	19,548	8,429	4,345	139,330	4,239	156,378
November .....	452,671	15,086	7,874	4,566	140,166	4,019	156,667
December .....	480,368	15,569	8,233	4,690	144,869	4,101	164,066
<b>Total</b> .....	5,108,366	238,203	95,533	50,264	1,625,837	49,468	1,811,734
<b>1996</b>							
January .....	437,274	21,912	8,089	4,503	135,594	4,276	143,693
February .....	412,611	18,686	7,386	4,266	126,370	3,880	139,115
March .....	446,371	11,208	8,385	4,443	138,091	4,164	131,701
April .....	436,014	32,072	8,225	4,098	132,572	4,122	147,949
May .....	451,148	18,021	9,026	4,244	138,946	4,273	149,425
June .....	434,668	23,572	8,983	3,496	131,778	3,990	143,675
July .....	449,052	27,119	9,335	3,603	125,193	4,047	146,451
August .....	449,461	23,261	9,193	4,050	126,967	4,096	148,463
September .....	431,768	20,208	8,641	4,172	122,040	4,185	143,302
October .....	421,252	20,374	8,996	4,668	123,570	4,246	150,322
November .....	427,566	16,081	8,487	4,521	124,377	4,216	146,828
December .....	443,563	13,227	8,518	4,933	128,590	4,178	143,965
<b>Total</b> .....	5,240,747	245,740	103,263	50,996	1,554,087	49,674	1,734,887
<b>1997</b>							
January .....	<sup>E</sup> 448,338	35,849	8,089	4,638	125,382	4,035	<sup>E</sup> 150,892
February .....	<sup>E</sup> 415,971	17,314	7,807	4,380	125,445	3,921	<sup>E</sup> 139,315
March .....	<sup>E</sup> 457,604	<sup>E</sup> 25,435	8,470	<sup>E</sup> 4,608	133,144	4,313	<sup>E</sup> 148,412
April .....	<sup>E</sup> 450,146	13,281	8,120	<sup>E</sup> 4,320	132,748	4,176	<sup>E</sup> 134,900
May .....	<sup>E</sup> 460,590	40,848	8,611	4,166	131,908	4,542	<sup>E</sup> 137,283
June .....	<sup>E</sup> 453,645	19,700	8,893	3,792	132,681	4,341	<sup>E</sup> 132,350
July .....	<sup>E</sup> 468,677	<sup>E</sup> 41,068	8,636	<sup>E</sup> 3,887	131,653	4,420	<sup>RE</sup> 144,337
August .....	<sup>E</sup> 469,613	19,081	9,626	<sup>E</sup> 4,241	<sup>E</sup> 136,147	4,454	<sup>E</sup> 146,320
<b>1997 YTD</b> .....	<sup>E</sup> 3,624,584	<sup>E</sup> 212,575	68,252	<sup>E</sup> 34,033	<sup>E</sup> 1,049,109	34,202	<sup>E</sup> 1,133,809
<b>1996 YTD</b> .....	3,516,598	175,851	68,622	32,702	1,055,511	32,849	<sup>E</sup> 1,150,471
<b>1995 YTD</b> .....	3,351,282	166,301	62,215	32,929	1,067,443	32,980	1,191,059

See footnotes at end of table.

**Table 7. Marketed Production of Natural Gas, by State, 1991-1997**  
(Million Cubic Feet) — Continued

Year and Month	Oregon	Texas <sup>c</sup>	Utah	Wyoming	Other <sup>a</sup> States	U.S. Total
<b>1991 Total</b> .....	2,741	6,280,654	144,817	776,528	784,362	18,532,439
<b>1992 Total</b> .....	2,580	6,145,862	171,293	842,576	800,913	18,711,808
<b>1993 Total</b> .....	4,003	6,249,624	225,401	634,957	788,472	18,981,915
<b>1994 Total</b> .....	3,221	6,353,844	270,858	696,018	774,724	19,709,525
<b>1995</b>						
January .....	279	528,857	22,354	62,919	66,793	1,676,643
February .....	214	479,553	21,686	50,369	61,412	1,495,384
March .....	208	538,515	25,813	57,602	64,520	1,659,694
April .....	150	523,631	24,529	59,544	61,326	1,604,162
May .....	137	539,311	22,498	54,039	62,505	1,648,688
June .....	135	526,759	15,626	51,792	63,229	1,586,994
July .....	150	548,617	17,120	55,403	61,116	1,639,474
August .....	139	545,415	17,676	57,125	62,212	1,628,213
September .....	128	520,687	18,447	51,741	59,787	1,580,857
October .....	128	524,049	16,987	57,494	63,766	1,610,256
November .....	126	522,744	18,062	56,956	62,910	1,656,989
December .....	130	531,909	20,493	58,792	70,151	1,719,118
<b>Total</b> .....	1,923	6,330,048	241,290	673,775	759,728	19,506,474
<b>1996</b>						
January .....	120	545,658	19,998	58,691	69,638	1,672,623
February .....	75	512,557	18,027	56,037	66,726	1,580,472
March .....	105	552,700	21,650	57,270	72,373	1,673,596
April .....	121	529,015	20,864	54,662	65,643	1,649,552
May .....	140	547,843	21,035	52,805	67,061	1,679,176
June .....	132	533,168	20,759	59,346	64,752	1,634,329
July .....	146	557,986	20,573	55,519	64,500	1,671,743
August .....	117	550,499	21,137	54,567	66,523	1,670,989
September .....	132	529,524	21,589	51,949	65,361	1,609,140
October .....	133	543,264	22,152	53,649	69,163	1,637,792
November .....	113	517,147	21,606	53,990	70,997	1,615,362
December .....	102	529,659	21,376	57,551	71,875	1,656,019
<b>Total</b> .....	1,439	6,449,022	250,767	666,036	814,612	19,750,793
<b>1997</b>						
January .....	105	560,683	21,782	53,272	<sup>E</sup> 69,157	<sup>E</sup> 1,692,806
February .....	98	509,089	19,115	45,143	<sup>E</sup> 64,219	<sup>E</sup> 1,547,768
March .....	101	560,042	21,912	62,872	<sup>E</sup> 68,518	<sup>E</sup> 1,708,280
April .....	102	531,761	19,570	60,661	<sup>E</sup> 64,329	<sup>E</sup> 1,624,930
May .....	102	549,243	22,053	62,147	<sup>E</sup> 64,899	<sup>E</sup> 1,687,907
June .....	97	527,306	19,815	55,384	<sup>E</sup> 64,227	<sup>E</sup> 1,616,460
July .....	98	533,930	<sup>R</sup> 21,711	60,873	<sup>E</sup> 64,033	<sup>RE</sup> 1,681,370
August .....	99	539,321	<sup>E</sup> 22,435	<sup>E</sup> 62,134	<sup>E</sup> 65,381	<sup>E</sup> 1,676,735
<b>1997 YTD</b> .....	803	4,311,375	<sup>E</sup> 168,391	<sup>E</sup> 462,485	<sup>E</sup> 524,763	<sup>E</sup> 13,236,258
<b>1996 YTD</b> .....	957	<sup>E</sup> 4,329,427	164,044	448,897	537,215	13,232,480
<b>1995 YTD</b> .....	1,411	4,230,659	167,302	448,793	503,114	12,939,253

<sup>a</sup> Includes Arkansas, Illinois, Indiana, Kentucky, Maryland, Missouri, Nebraska, Nevada, New York, Ohio, Pennsylvania, South Dakota, Tennessee, Virginia and West Virginia. The 1997 monthly values for these States are estimated.

<sup>b</sup> The 1992, 1993, 1994, 1995, and 1996 monthly and annual values include Federal Offshore production.

<sup>c</sup> Monthly Federal offshore production volumes are included.

<sup>R</sup> = Revised Data.

<sup>E</sup> = Estimated Data.

<sup>RE</sup> = Revised Estimated Data.

Notes: Data for 1991 through 1996 are final. All other data are preliminary unless otherwise indicated. Totals may not equal sum of components because of independent rounding. See Appendix A, Explanatory Notes 1 and 3 for discussion of computation procedures and revision policy.

Sources: 1991-1996: Energy Information Administration (EIA), *Natural Gas Annual 1996*. 1997 through current month: Form EIA-895, "Monthly Quantity of Natural Gas Report," Minerals Management Service reports, and EIA computations.



**Table 8. Gross Withdrawals and Marketed Production of Natural Gas by State,  
August 1997**  
(Million Cubic Feet)

State	Gross Withdrawals			Repressuring	Nonhydro- carbon Gases Removed <sup>a</sup>	Vented and Flared	Marketed Production
	From Gas Wells	From Oil Wells	Total				
Alabama .....	33,712	908	34,619	1,788	2,214	131	30,487
Alaska .....	14,095	237,088	251,184	214,098	0	660	36,425
Arizona .....	26	3	30	0	0	0	30
California .....	6,206	27,894	34,101	10,132	93	45	23,831
Colorado .....	45,600	7,406	53,006	623	0	147	52,235
Florida .....	0	568	568	0	65	0	503
Kansas .....	<sup>E</sup> 47,977	<sup>E</sup> 6,542	<sup>E</sup> 54,519	<sup>E</sup> 93	0	<sup>E</sup> 55	<sup>E</sup> 54,372
Louisiana .....	<sup>E</sup> 413,256	<sup>E</sup> 62,124	<sup>E</sup> 475,381	<sup>E</sup> 3,728	0	<sup>E</sup> 2,039	<sup>E</sup> 469,613
Michigan .....	15,642	3,911	19,553	195	0	277	19,081
Mississippi .....	10,483	671	11,154	610	677	242	9,626
Montana .....	<sup>E</sup> 3,766	<sup>E</sup> 512	<sup>E</sup> 4,278	<sup>E</sup> 5	0	<sup>E</sup> 32	<sup>E</sup> 4,241
New Mexico .....	<sup>E</sup> 120,000	<sup>E</sup> 20,886	<sup>E</sup> 140,886	<sup>E</sup> 910	<sup>E</sup> 3,590	<sup>E</sup> 239	<sup>E</sup> 136,147
North Dakota .....	1,418	3,407	4,825	0	24	347	4,454
Oklahoma .....	<sup>E</sup> 123,028	<sup>E</sup> 23,292	<sup>E</sup> 146,320	0	0	0	<sup>E</sup> 146,320
Oregon .....	118	0	118	5	14	0	99
Texas .....	478,195	115,709	593,904	38,434	13,650	2,499	539,321
Utah .....	<sup>E</sup> 19,977	<sup>E</sup> 3,667	<sup>E</sup> 23,644	<sup>E</sup> 71	0	<sup>E</sup> 1,138	<sup>E</sup> 22,435
Wyoming .....	<sup>E</sup> 90,893	<sup>E</sup> 9,920	<sup>E</sup> 100,813	<sup>E</sup> 12,214	<sup>E</sup> 13,223	<sup>E</sup> 13,241	<sup>E</sup> 62,134
Other States .....	<sup>E</sup> 61,881	<sup>E</sup> 4,390	<sup>E</sup> 66,271	<sup>E</sup> 184	0	<sup>E</sup> 706	<sup>E</sup> 65,381
<b>Total .....</b>	<sup>E</sup> 1,486,273	<sup>E</sup> 528,900	<sup>E</sup> 2,015,173	<sup>E</sup> 283,090	<sup>E</sup> 33,551	<sup>E</sup> 21,797	<sup>E</sup> 1,676,735

<sup>a</sup> See Appendix A, Explanatory Note 1, for a discussion of data on Nonhydrocarbon Gases Removed.

<sup>E</sup> = Estimated Data.

Notes: All monthly data are considered preliminary until publication of the *Natural Gas Annual* for that year. Totals may not equal sum of components because of independent rounding. See Appendix A, Explanatory Notes 1 and 3 for discussion of computation procedures and revision policy.

Source: Form EIA-895, "Monthly Quantity of Natural Gas Report."

**Table 9. Underground Natural Gas Storage - All Operators, 1991-1997**

(Volumes in Billion Cubic Feet)

Year and Month	Natural Gas in Underground Storage at End of Period			Change In Working Gas from Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total <sup>b</sup>	Volume	Percent	Injections	Withdrawals	Net Withdrawals <sup>c</sup>
<b>1991 Total<sup>a</sup></b> .....	3,954	2,824	6,778	-244	-8.0	2,608	2,689	80
<b>1992 Total<sup>a</sup></b> .....	4,044	2,597	6,641	-227	-8.0	2,555	2,724	168
<b>1993 Total<sup>a</sup></b> .....	4,327	2,322	6,649	-275	-10.6	2,760	2,717	-43
<b>1994 Total<sup>a</sup></b> .....	4,360	2,606	6,966	284	12.2	2,796	2,508	-288
<b>1995</b>								
January .....	4,365	2,045	6,410	466	29.5	45	644	599
February .....	4,368	1,542	5,910	451	41.4	44	564	519
March .....	4,362	1,332	5,694	374	39.0	104	327	223
April .....	4,360	1,379	5,740	207	17.7	177	127	-49
May .....	4,393	1,668	6,061	114	7.3	369	34	-335
June .....	4,406	2,014	6,420	118	6.2	410	40	-371
July .....	4,340	2,301	6,641	28	1.2	359	54	-306
August .....	4,339	2,495	6,834	-112	-4.3	293	86	-207
September .....	4,341	2,802	7,143	-110	-3.8	343	29	-313
October .....	4,338	2,996	7,334	-79	-2.6	274	68	-205
November .....	4,342	2,728	7,070	-249	-8.4	96	367	272
December .....	4,349	2,153	6,503	-453	-17.4	53	635	582
<b>Total</b> .....	—	—	—	—	—	2,566	2,974	408
<b>1996</b>								
January .....	4,354	1,462	5,817	-583	-28.5	49	749	700
February .....	4,349	1,021	5,369	-521	-33.8	97	544	447
March .....	4,290	758	5,048	-574	-43.1	80	403	323
April .....	4,312	854	5,166	-525	-38.1	227	112	-115
May .....	4,332	1,161	5,493	-507	-30.4	373	45	-328
June .....	4,341	1,529	5,870	-485	-24.1	410	35	-375
July .....	4,336	1,898	6,234	-404	-17.5	418	49	-370
August .....	4,332	2,245	6,577	-250	-10.0	400	54	-346
September .....	4,338	2,605	6,943	-197	-7.0	398	32	-366
October .....	4,335	2,810	7,145	-186	-6.2	276	73	-203
November .....	4,339	2,549	6,889	-179	-6.6	90	354	264
December .....	4,341	2,173	6,513	19	0.9	86	461	374
<b>Total</b> .....	—	—	—	—	—	2,906	2,911	6
<b>1997</b>								
January .....	4,347	1,496	5,843	34	2.3	66	749	683
February .....	4,341	1,140	5,481	119	11.7	53	411	358
March .....	4,344	990	5,334	232	30.6	126	281	156
April .....	4,340	1,049	5,390	195	22.9	202	143	-59
May .....	4,342	1,360	5,701	199	17.1	360	38	-322
June .....	4,355	1,731	6,087	202	13.2	405	39	-366
July .....	4,354	2,018	6,372	120	6.3	355	81	-274
August .....	4,355	2,334	6,689	90	4.0	376	52	-323
September .....	4,357	2,667	7,024	62	2.4	373	43	-330
October .....	<sup>R</sup> 4,424	<sup>R</sup> 2,905	<sup>R</sup> 7,329	<sup>R</sup> 94	<sup>R</sup> 3.3	296	84	<sup>R</sup> -212
<b>November(STIFS)</b> .....	<sup>RE</sup> 4,424	<sup>RE</sup> 2,684	<sup>RE</sup> 7,108	<sup>RE</sup> 134	<sup>RE</sup> 5.3	NA	NA	<sup>RE</sup> 221
<b>December(STIFS)</b> .....	<sup>E</sup> 4,424	<sup>E</sup> 2,274	<sup>E</sup> 6,698	<sup>E</sup> 101	<sup>E</sup> 4.7	NA	NA	<sup>E</sup> 410
<b>Total</b> .....	—	—	—	—	—	NA	NA	<sup>E</sup> -58

<sup>a</sup> Total as of December 31.

<sup>b</sup> Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1991 - 7,993; 1992 - 7,932; 1993 - 7,989; 1994 - 8,043; 1995 - 7,927; and 1996 - 8,159.

<sup>c</sup> Negative numbers indicate the volume of injections in excess of withdrawals. Positive numbers indicate the volume of withdrawals in excess of injections.

<sup>R</sup> = Revised Data.

<sup>E</sup> = Estimated Data.

<sup>RE</sup> = Revised Estimated Data.

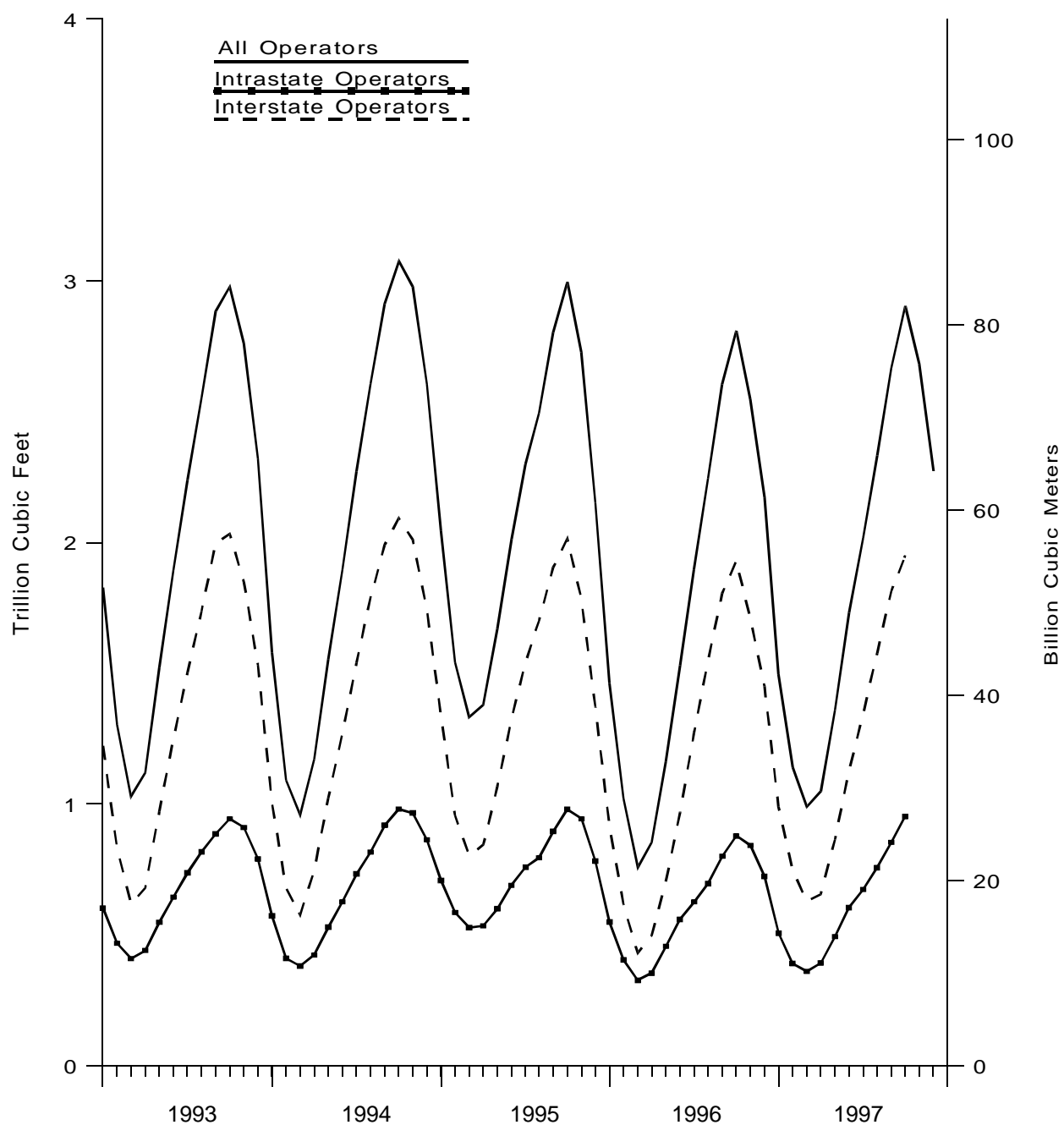
NA = Not Available.

— = Not Applicable.

Notes: Data for 1991 through 1996 are final. All other data are preliminary unless otherwise noted. Estimates for the most recent two months are derived from the Short-Term Integrated Forecasting System (STIFS). See Explanatory Note 7 of the *Natural Gas Monthly* for discussion of revision policy. Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals during the period to the quantity of gas in storage at the beginning of the period. This is due to changes in the quantities of native gas included in base gas and/or losses in base gas due to migration from storage reservoirs. Totals may not equal sum of components because of independent rounding. Geographic coverage is the 50 States and the District of Columbia. In January 1995, 2 billion cubic feet was added to base gas for two new respondents. Positive net withdrawals indicate the volume of withdrawals in excess of injections. Negative net withdrawals indicate the volume of injections in excess of withdrawals.

Sources: Form EIA-191, "Monthly Underground Gas Storage Report," Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition," and STIFS.

**Figure 5. Underground Natural Gas Storage in the United States, 1993-1997**



Sources: Energy Information Administration, Form EIA-191, "Monthly Underground Gas Storage Report," and Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

**Table 10. Underground Natural Gas Storage - Interstate Operators of Storage Fields, 1991-1997**

(Volumes in Billion Cubic Feet)

Year and Month	Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total <sup>b</sup>	Volume	Percent	Injections	Withdrawals	Net Withdrawals
<b>1991 Total<sup>a</sup></b> .....	2,571	1,985	4,556	-218	-9.9	1,904	2,015	111
<b>1992 Total<sup>a</sup></b> .....	2,652	1,819	4,471	-166	-8.4	1,838	1,940	102
<b>1993 Total<sup>a</sup></b> .....	2,939	1,531	4,470	-288	-15.8	1,911	1,894	-17
<b>1994 Total<sup>a</sup></b> .....	2,960	1,743	4,703	212	13.8	1,913	1,701	-213
<b>1995</b>								
January .....	2,957	1,336	4,293	330	32.8	27	449	422
February .....	2,958	956	3,914	276	40.6	20	404	384
March .....	2,955	804	3,759	228	39.6	66	225	159
April .....	2,954	845	3,799	97	13.0	122	78	-43
May .....	2,956	1,067	4,024	43	4.2	250	17	-233
June .....	2,962	1,324	4,287	55	4.3	292	23	-268
July .....	2,896	1,543	4,438	3	0.2	257	28	-229
August .....	2,893	1,700	4,593	-90	-5.0	208	45	-163
September .....	2,894	1,906	4,800	-86	-4.3	225	16	-209
October .....	2,891	2,016	4,907	-78	-3.7	162	48	-114
November .....	2,895	1,785	4,680	-226	-11.3	38	272	234
December .....	2,899	1,372	4,271	-371	-21.3	25	442	417
<b>Total</b> .....	—	—	—	—	—	1,692	2,048	356
<b>1996</b>								
January .....	2,897	913	3,809	-424	-31.7	23	482	459
February .....	2,894	616	3,510	-340	-35.6	60	359	298
March .....	2,854	431	3,286	-372	-46.3	44	268	224
April .....	2,868	499	3,367	-346	-40.9	152	73	-80
May .....	2,884	704	3,589	-363	-34.0	250	27	-224
June .....	2,893	969	3,862	-355	-26.8	286	16	-270
July .....	2,891	1,271	4,162	-272	-17.6	313	17	-296
August .....	2,889	1,549	4,437	-151	-8.9	292	14	-277
September .....	2,893	1,804	4,697	-102	-5.4	273	13	-260
October .....	2,892	1,932	4,824	-84	-4.2	172	46	-126
November .....	2,893	1,707	4,600	-78	-4.4	40	263	224
December .....	2,894	1,449	4,343	77	5.6	47	303	257
<b>Total</b> .....	—	—	—	—	-16.9	1,953	1,881	-72
<b>1997</b>								
January .....	2,887	990	3,876	77	8.4	38	498	461
February .....	2,887	749	3,636	133	21.6	32	276	244
March .....	2,885	629	3,514	197	45.7	72	195	123
April .....	2,883	656	3,538	157	31.4	114	88	-26
May .....	2,884	865	3,750	161	22.9	234	20	-214
June .....	2,894	1,126	4,021	157	16.3	278	16	-262
July .....	2,893	1,344	4,238	74	5.8	248	43	-206
August .....	2,893	1,577	4,470	29	1.8	257	20	-237
September .....	2,893	1,813	4,705	9	0.5	245	11	-234
October .....	2,960	1,952	4,912	20	1.0	168	56	-112

<sup>a</sup> Total as of December 31.

<sup>b</sup> Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1991 - 5,512; 1992 - 5,524; 1993 - 5,367; 1994 - 5,351; 1995 - 5,314; and 1996 - 7,952.

— = Not Applicable.

Notes: Data for 1991 through 1996 are final. All other data are preliminary unless otherwise noted. See Explanatory Note 7 of the *Natural Gas Monthly* for discussion of revision policy. Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals during the period to the quantity of gas in storage at the beginning of the period. This is due to changes in the quantities of native gas included in base gas and/or losses in base gas due to migration from storage reservoirs. Totals may not equal sum of components because of independent rounding. Geographic coverage is the 50 States and the District of Columbia. Positive net withdrawals indicate the volume of withdrawals in excess of injections. Negative net withdrawals indicate the volume of injections in excess of withdrawals.

Sources: Form EIA-191, "Monthly Underground Gas Storage Report," and Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

**Table 11. Underground Natural Gas Storage - Intrastate Operators and Independent Producers, 1991-1997**  
(Volumes in Billion Cubic Feet)

Year and Month	Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total <sup>b</sup>	Volume	Percent	Injections	Withdrawals	Net Withdrawals
<b>1991 Total<sup>a</sup></b> .....	1,383	839	2,221	-25	-2.9	705	674	-31
<b>1992 Total<sup>a</sup></b> .....	1,392	778	2,170	-61	-7.3	717	784	67
<b>1993 Total<sup>a</sup></b> .....	1,388	791	2,179	13	1.7	826	802	-24
<b>1994 Total<sup>a</sup></b> .....	1,400	864	2,263	73	9.2	882	807	-75
<b>1995</b>								
January .....	1,409	709	2,118	136	23.7	17	195	177
February .....	1,410	586	1,995	175	42.6	24	160	136
March .....	1,407	528	1,935	146	38.2	38	102	64
April .....	1,406	535	1,941	111	26.1	55	49	-6
May .....	1,437	601	2,037	70	13.3	120	17	-103
June .....	1,443	690	2,133	63	10.0	119	16	-102
July .....	1,444	759	2,203	25	3.4	102	25	-77
August .....	1,446	795	2,241	-22	-2.7	85	41	-44
September .....	1,447	896	2,343	-24	-2.6	118	14	-104
October .....	1,446	980	2,427	-1	-0.1	112	20	-91
November .....	1,447	944	2,390	-23	-2.4	57	95	38
December .....	1,450	782	2,232	-82	-9.5	28	192	165
<b>Total</b> .....	—	—	—	—	—	874	926	52
<b>1996</b>								
January .....	1,457	550	2,007	-159	-22.4	26	267	241
February .....	1,455	405	1,859	-181	-30.9	36	185	148
March .....	1,436	327	1,763	-202	-38.2	36	135	98
April .....	1,445	355	1,800	-179	-33.6	75	40	-35
May .....	1,447	457	1,904	-144	-23.9	123	19	-104
June .....	1,448	560	2,008	-129	-18.8	124	19	-105
July .....	1,445	627	2,072	-132	-17.4	105	32	-73
August .....	1,443	696	2,139	-99	-12.4	109	40	-69
September .....	1,445	801	2,246	-95	-10.6	125	19	-106
October .....	1,443	879	2,322	-102	-10.4	104	27	-76
November .....	1,447	842	2,289	-102	-10.8	51	91	40
December .....	1,447	724	2,170	-58	-7.4	40	158	118
<b>Total</b> .....	—	—	—	—	-18.0	953	1,030	77
<b>1997</b>								
January .....	1,460	507	1,966	-43	-7.9	29	251	222
February .....	1,454	391	1,845	-14	-3.4	21	135	114
March .....	1,459	361	1,820	35	10.6	54	86	32
April .....	1,458	394	1,851	39	10.9	88	55	-33
May .....	1,458	494	1,952	37	8.2	126	18	-107
June .....	1,461	605	2,066	45	8.0	127	24	-104
July .....	1,461	674	2,135	47	7.5	107	39	-68
August .....	1,462	757	2,219	61	8.8	118	32	-86
September .....	1,464	854	2,318	53	6.7	128	32	-96
October .....	1,465	953	2,417	74	8.4	128	28	-100

<sup>a</sup> Total as of December 31.

<sup>b</sup> Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1991 - 2,481; 1992 - 2,407; 1993 - 2,621; 1994 - 2,692.; 1995 - 2,613; and 1996 - 7,952.

— = Not Applicable.

Notes: Data for 1991 through 1996 are final. All other data are preliminary unless otherwise noted. See Explanatory Note 7 of the *Natural Gas Monthly* for discussion of revision policy. Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals during the period to the quantity of gas in storage at the beginning of the period. This is due to changes in the quantities of native gas included in base gas and/or losses in base gas due to migration from storage reservoirs. Totals may not equal sum of components because of independent rounding. Geographic coverage is the 50 States and the District of Columbia. Positive net withdrawals indicate the volume of withdrawals in excess of injections. Negative net withdrawals indicate the volume of injections in excess of withdrawals.

Sources: Form EIA-191, "Monthly Underground Gas Storage Report," and Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

**Table 12. Net Withdrawals from Underground Storage, by State, 1995-1997**  
(Volumes in Million Cubic Feet)

State	1997						
	October	September	August	July	June	May	April
Alabama .....	-251	-262	-286	-43	-93	-271	-130
Arkansas .....	271	-1,048	-1,234	-1,472	-1,340	-608	178
California .....	-11,834	-6,814	-8,430	-11,406	-23,191	-24,048	-19,220
Colorado .....	458	-5,141	-4,488	-5,540	-5,257	-5,328	5,569
Illinois .....	-30,203	-34,708	-36,934	-24,289	-29,099	-24,940	-546
Indiana .....	-3,135	-4,603	-3,749	-3,317	-1,914	-110	1,444
Iowa .....	-8,358	-12,762	-10,938	-3,722	-8,361	-3,473	1,627
Kansas .....	-7,912	-13,678	-11,439	-3,703	-12,195	-9,699	-1,605
Kentucky .....	-2,925	-7,983	-6,520	-7,391	-8,991	-7,821	-343
Louisiana .....	-24,016	-22,111	-15,080	-13,862	-20,312	-19,293	-4,278
Maryland .....	-2,283	-2,766	-2,292	-1,497	-1,657	-1,590	133
Michigan .....	-32,384	-64,521	-72,305	-75,302	-72,604	-46,126	-13,752
Minnesota .....	0	-130	-137	-321	-312	-273	-31
Mississippi .....	-2,145	-5,274	-3,115	1,249	-3,812	-5,552	442
Missouri .....	-215	-240	-379	-433	-112	-1,200	56
Montana .....	1,015	-1,490	-2,339	-2,710	-1,633	-846	1,810
Nebraska .....	-66	-1,091	-964	-75	-797	-708	-43
New Mexico .....	-1,305	-853	-328	587	-534	-1,228	583
New York .....	-2,390	-6,626	-11,609	-11,628	-10,571	-7,770	-1,700
Ohio .....	-8,799	-23,528	-32,054	-34,093	-37,335	-34,081	-1,385
Oklahoma .....	-19,571	-14,433	-8,317	-1,448	-8,028	-18,258	-7,130
Oregon .....	-93	-391	-1,123	-1,240	-1,602	-1,239	543
Pennsylvania .....	-16,030	-47,372	-44,991	-41,099	-49,619	-44,272	-3,306
Texas .....	-30,743	-24,920	-13,272	6,604	-20,500	-27,751	-17,395
Utah .....	-1,301	-3,235	-5,284	-8,117	-7,950	-4,255	-2,150
Washington .....	707	-2,267	990	-490	-3,766	-5,880	-66
West Virginia .....	-8,103	-19,007	-24,039	-26,065	-31,691	-23,964	1,715
Wyoming .....	-577	-2,424	-2,712	-3,393	-2,290	-1,119	127
<b>Total .....</b>	<b>-212,189</b>	<b>-329,677</b>	<b>-323,371</b>	<b>-274,218</b>	<b>-365,566</b>	<b>-321,702</b>	<b>-58,853</b>

See footnotes at end of table.

**Table 12. Net Withdrawals from Underground Storage, by State, 1995-1997**

(Volumes in Million Cubic Feet) — Continued

State	1997			1996			
	March	February	January	Total	December	November	October
Alabama .....	-25	184	531	-1,224	761	129	-117
Arkansas .....	342	1,006	1,978	64	644	562	-603
California .....	-441	19,742	38,477	51,292	14,985	-2,885	-6,393
Colorado .....	2,069	4,862	5,523	-1,004	2,923	92	-87
Illinois .....	23,189	39,774	63,858	-15,108	35,109	15,523	-28,103
Indiana .....	2,498	2,866	7,272	-1,801	3,290	-853	-2,715
Iowa .....	2,953	8,469	15,926	-1,229	18,020	5,502	-10,555
Kansas .....	4,096	9,102	13,633	12,118	12,290	12,828	-6,005
Kentucky .....	4,166	8,068	18,108	-7,530	8,039	4,853	-2,826
Louisiana .....	-17,950	21,117	47,088	10,964	32,273	29,327	-15,704
Maryland .....	1,903	2,662	5,873	24	958	1,424	-1,553
Michigan .....	53,314	71,108	120,403	-31,671	83,640	61,160	-49,100
Minnesota .....	188	117	588	-30	218	30	-35
Mississippi .....	-2,306	2,924	12,169	-12,758	4,658	5,707	-3,369
Missouri .....	1,174	-252	1,126	-48	76	306	-210
Montana .....	2,591	3,983	5,651	11,725	5,512	4,760	336
Nebraska .....	-241	504	867	-1,489	1,108	479	600
New Mexico .....	501	1,527	591	5,338	-823	607	482
New York .....	9,210	10,116	17,636	-13,367	8,151	6,347	-2,750
Ohio .....	21,557	28,120	58,636	-10,844	35,138	25,728	-13,648
Oklahoma .....	-8,092	7,912	27,616	22,961	20,970	17,468	-10,345
Oregon .....	920	1,078	1,341	783	1,240	552	170
Pennsylvania .....	50,263	52,298	94,228	-59,533	25,003	33,464	-15,621
Texas .....	-21,183	24,869	55,056	63,869	24,153	12,557	-22,072
Utah .....	-2,620	2,520	8,931	12,955	9,164	4,651	1,416
Washington .....	3,217	1,798	1,587	2,067	1,746	462	1,648
West Virginia .....	23,312	28,900	53,643	-35,844	21,644	19,884	-15,242
Wyoming .....	1,082	2,976	4,361	5,056	3,529	2,903	-272
<b>Total .....</b>	<b>155,688</b>	<b>358,350</b>	<b>682,696</b>	<b>5,735</b>	<b>374,417</b>	<b>263,567</b>	<b>-202,675</b>

See footnotes at end of table.

**Table 12. Net Withdrawals from Underground Storage, by State, 1995-1997**  
(Volumes in Million Cubic Feet) — Continued

State	1996						
	September	August	July	June	May	April	March
Alabama .....	-440	-395	-205	-670	-367	-153	162
Arkansas .....	-1,153	-615	-744	-1,166	-1,302	-44	1,259
California .....	-6,822	15,439	7,028	-9,697	-23,523	-11,917	1,459
Colorado .....	-3,828	-3,722	-5,347	-5,035	-2,271	1,268	5,022
Illinois .....	-36,529	-35,172	-35,480	-32,122	-26,711	-3,200	22,829
Indiana .....	-3,911	-6,115	-4,278	-2,398	-178	948	3,532
Iowa .....	-12,536	-13,166	-12,393	-7,677	-1,640	1,980	6,303
Kansas .....	-8,532	-8,265	-7,537	-12,192	-7,892	-5,779	9,984
Kentucky .....	-8,590	-10,071	-13,358	-14,231	-6,224	380	7,911
Louisiana .....	-33,463	-32,218	-29,380	-16,986	-11,703	-2,727	25,245
Maryland .....	-1,677	-1,845	-1,887	-2,621	-2,154	212	1,827
Michigan .....	-81,220	-82,649	-80,355	-78,794	-58,040	-14,063	51,828
Minnesota .....	-202	-213	-287	-294	-366	-90	213
Mississippi .....	-7,330	-7,868	-8,061	-6,662	-2,502	-4,083	6,016
Missouri .....	-204	-206	-240	-261	-1,319	296	384
Montana .....	-3,519	-3,501	-3,261	-3,577	782	647	3,884
Nebraska .....	-785	-1,346	-1,193	-1,924	-1,617	-303	802
New Mexico .....	-1,873	363	811	48	21	519	2,200
New York .....	-7,327	-12,585	-12,964	-12,079	-13,349	-2,711	8,971
Ohio .....	-23,807	-29,581	-36,092	-37,165	-30,055	-8,729	29,225
Oklahoma .....	-18,814	-14,973	-8,211	-10,949	-19,131	-4,435	14,679
Oregon .....	-121	-509	-1,318	-1,365	-841	132	651
Pennsylvania .....	-37,711	-52,038	-69,480	-62,061	-46,338	-22,497	43,459
Texas .....	-34,225	-18,108	-2,670	-13,902	-28,071	-22,764	43,870
Utah .....	-2,204	-3,884	-6,821	-6,742	-5,533	-188	2,388
Washington .....	-597	-1,965	-935	-3,317	-1,973	-356	540
West Virginia .....	-28,009	-19,913	-32,686	-29,535	-32,767	-16,242	26,887
Wyoming .....	-613	-771	-2,160	-1,760	-2,704	-644	1,095
<b>Total .....</b>	<b>-366,042</b>	<b>-345,894</b>	<b>-369,504</b>	<b>-375,133</b>	<b>-327,768</b>	<b>-114,544</b>	<b>322,623</b>

See footnotes at end of table.



**Table 12. Net Withdrawals from Underground Storage, by State, 1995-1997**  
(Volumes in Million Cubic Feet) — Continued

State	1996		1995			
	February	January	Total	December	November	October
Alabama .....	17	54	73	400	189	73
Arkansas .....	1,115	2,112	709	2,149	618	80
California .....	25,693	47,924	-27,358	25,933	-1,980	-18,197
Colorado .....	1,417	8,564	-3,152	5,194	-1,616	-1,296
Illinois .....	40,993	67,753	22,981	51,971	18,278	-38,814
Indiana .....	3,804	7,073	711	4,401	-844	-4,448
Iowa .....	8,653	16,282	6,443	17,220	12,827	-7,844
Kansas .....	6,590	26,627	4,875	16,419	7,352	-10,864
Kentucky .....	12,179	14,407	7,178	11,394	9,279	-2,526
Louisiana .....	23,235	43,064	52,753	46,245	24,216	-14,079
Maryland .....	3,086	4,254	4,049	3,350	689	-1,123
Michigan .....	83,725	132,197	117,409	115,938	66,298	-32,377
Minnesota .....	250	748	104	245	2	-6
Mississippi .....	3,023	7,713	7,783	6,445	9,486	-2,596
Missouri .....	-97	1,428	-197	330	-165	-124
Montana .....	3,443	6,220	3,599	5,251	3,048	554
Nebraska .....	754	1,937	5,844	1,597	1,602	745
New Mexico .....	1,614	1,370	2,273	1,527	1,120	-20
New York .....	12,756	14,174	14,746	17,605	9,671	-1,689
Ohio .....	33,937	44,205	38,862	43,090	24,176	-8,835
Oklahoma .....	23,470	33,230	19,264	24,431	8,327	-13,868
Oregon .....	940	1,252	-880	822	58	0
Pennsylvania .....	64,167	80,122	63,786	78,025	45,269	-22,123
Texas .....	49,673	75,427	26,165	49,476	11,542	-9,871
Utah .....	8,372	12,335	-118	9,829	-1,367	-528
Washington .....	769	6,047	-2,363	1,015	-67	100
West Virginia .....	30,318	39,816	41,129	39,382	23,047	-14,545
Wyoming .....	3,044	3,410	1,552	2,100	768	-1,125
<b>Total .....</b>	<b>446,941</b>	<b>699,748</b>	<b>408,220</b>	<b>581,782</b>	<b>271,826</b>	<b>-205,344</b>

Notes: This table contains total net withdrawals for each State with natural gas storage facilities. Positive numbers indicate the volume of withdrawals in excess of injections. Negative values indicate the volume of injections in excess of withdrawals. Data through 1996 are final. All other data are preliminary at this time and are not considered final until publication of the *Natural Gas Annual* for that year.

Source: Form EIA-191, "Monthly Underground Gas Storage Report."

**Table 13. Activities of Underground Natural Gas Storage Operators, by State,  
October 1997**

(Volumes in Million Cubic Feet)

State	Total Storage Capacity	Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity	
		Base Gas	Working Gas	Total	Volume	Percent	Injections	Withdrawals
Alabama .....	3,280	1,190	1,766	2,956	-242	-12.1	251	0
Arkansas .....	31,871	11,245	7,647	18,891	1,963	34.5	93	364
California .....	469,696	247,419	187,001	434,419	34,685	22.8	15,288	3,454
Colorado .....	99,600	47,902	37,519	85,421	4,144	12.4	3,197	3,655
Illinois .....	898,239	717,368	280,321	997,688	24,638	9.6	32,225	2,022
Indiana .....	113,210	73,777	33,629	107,407	-2,544	-7.0	3,570	435
Iowa .....	270,200	200,700	60,701	261,401	-654	-1.1	9,270	913
Kansas .....	298,666	191,084	94,258	285,341	10,419	12.4	12,486	4,574
Kentucky .....	219,908	109,093	96,130	205,223	-745	-0.8	5,231	2,306
Louisiana .....	559,473	270,511	208,284	478,795	14,327	7.4	34,427	10,411
Maryland .....	62,000	46,677	14,442	61,119	-548	-3.7	2,371	87
Michigan .....	1,052,236	429,034	572,322	1,001,356	1,023	0.2	38,736	6,352
Minnesota .....	7,000	4,623	2,381	7,004	53	2.3	0	0
Mississippi .....	134,012	77,263	51,339	128,602	-3,536	-6.4	6,235	4,090
Missouri .....	31,126	21,600	9,466	31,066	95	1.0	223	9
Montana .....	375,010	167,380	51,991	219,372	-16,274	-23.8	1,389	2,403
Nebraska .....	39,469	31,507	4,564	36,071	1,176	34.7	365	299
New Mexico .....	96,600	25,766	6,720	32,485	853	14.5	2,073	768
New York .....	173,979	103,540	68,612	172,151	-3,789	-5.2	4,998	2,607
Ohio .....	557,452	352,910	183,368	536,278	-363	-0.2	15,138	6,339
Oklahoma .....	395,087	233,763	117,116	350,879	7,257	6.6	22,301	2,729
Oregon .....	11,623	4,896	6,773	11,669	14	0.2	93	0
Pennsylvania .....	680,006	357,028	348,766	705,795	-8,535	-2.4	27,438	11,407
Texas .....	678,534	254,491	220,752	475,244	36,332	19.7	39,877	9,134
Utah .....	121,980	62,100	40,231	102,331	8,139	25.4	2,823	1,522
Washington .....	37,300	22,096	14,098	36,194	1,707	13.8	257	964
West Virginia .....	484,597	298,632	161,216	459,848	-13,049	-7.5	14,817	6,714
Wyoming .....	105,869	60,782	23,138	83,920	-2,470	-9.6	965	387
<b>Total .....</b>	<b>8,008,021</b>	<b>4,424,379</b>	<b>2,904,549</b>	<b>7,328,928</b>	<b>94,074</b>	<b>3.3</b>	<b>296,136</b>	<b>83,946</b>

Notes: Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals during the period to the quantity of gas in storage at the beginning of the period. This is due to changes in the quantities of native gas included in base gas and/or losses in base gas due to migration from storage reservoirs. Totals may not equal sum of components because of independent rounding. Geographic coverage is the 50 States and the District of Columbia.

Source: Form EIA-191, "Monthly Underground Gas Storage Report."

**Table 14. Natural Gas Deliveries to Residential Consumers, by State, 1995-1997**  
(Million Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997		
				September	August	July
Alabama .....	35,016	44,750	36,563	1,250	1,238	1,392
Alaska .....	9,716	11,052	10,660	743	402	463
Arizona .....	23,345	20,254	21,159	1,127	910	1,019
Arkansas .....	30,733	34,811	29,255	949	918	1,028
California .....	351,281	336,241	362,376	21,772	20,951	26,840
Colorado .....	79,709	80,652	77,737	NA	NA	NA
Connecticut .....	28,911	32,560	29,507	1,001	903	949
Delaware .....	6,796	7,617	6,442	183	178	194
District of Columbia .....	11,419	13,055	11,412	393	372	419
Florida .....	10,553	12,986	11,083	699	742	785
Georgia .....	71,317	88,066	72,286	3,190	2,944	3,195
Hawaii .....	393	416	442	40	41	43
Idaho .....	10,806	10,501	9,263	NA	294	346
Illinois .....	341,883	366,031	328,282	11,697	10,111	10,378
Indiana .....	118,747	NA	108,996	3,491	2,989	2,852
Iowa .....	56,698	60,538	52,965	1,645	1,472	1,593
Kansas .....	53,417	58,377	52,041	1,629	1,616	1,862
Kentucky .....	43,552	48,015	41,470	1,448	1,077	1,419
Louisiana .....	37,952	44,841	38,739	1,697	1,671	1,685
Maine .....	694	674	617	30	26	21
Maryland .....	54,344	NA	53,039	2,067	<sup>R</sup> 1,800	<sup>R</sup> 1,906
Massachusetts .....	80,775	85,463	76,814	2,555	2,437	2,831
Michigan .....	273,718	289,408	261,392	8,767	7,264	4,748
Minnesota .....	92,499	98,502	85,734	2,864	2,556	2,706
Mississippi .....	19,631	NA	19,792	NA	NA	NA
Missouri .....	93,261	100,677	89,830	2,625	2,403	2,717
Montana .....	14,539	15,164	13,320	508	447	411
Nebraska .....	35,659	35,489	33,158	936	<sup>R</sup> 937	<sup>R</sup> 1,015
Nevada .....	18,352	16,258	16,163	802	777	887
New Hampshire .....	5,073	5,178	4,713	NA	155	160
New Jersey .....	153,367	163,787	135,620	5,309	4,680	5,102
New Mexico .....	22,941	23,008	19,775	830	843	815
New York .....	293,689	NA	272,350	NA	NA	NA
North Carolina .....	37,449	44,042	34,951	935	900	1,074
North Dakota .....	8,777	8,887	7,996	229	206	228
Ohio .....	247,221	265,128	239,631	7,228	6,202	7,533
Oklahoma .....	52,545	57,342	51,378	1,548	1,519	1,679
Oregon .....	23,914	23,515	20,369	737	670	836
Pennsylvania .....	185,159	201,680	179,230	6,315	4,714	5,153
Rhode Island .....	13,530	NA	12,701	473	443	480
South Carolina .....	17,811	22,103	17,834	466	444	512
South Dakota .....	9,592	NA	8,745	261	233	248
Tennessee .....	45,671	52,310	41,397	1,187	1,080	1,119
Texas .....	149,931	168,094	148,897	6,416	6,101	6,829
Utah .....	37,409	36,177	33,219	1,957	1,466	1,501
Vermont .....	1,954	1,913	1,683	59	52	57
Virginia .....	51,621	55,001	46,656	1,640	1,473	1,576
Washington .....	48,763	43,747	37,025	NA	NA	NA
West Virginia .....	24,412	27,224	24,446	784	594	488
Wisconsin .....	94,423	102,101	89,248	2,925	NA	2,751
Wyoming .....	8,853	NA	NA	330	<sup>R</sup> 252	<sup>R</sup> 294
<b>Total .....</b>	<b>3,539,817</b>	<b>3,757,589</b>	<b>3,387,249</b>	<b>131,787</b>	<b><sup>R</sup>119,148</b>	<b><sup>R</sup>130,510</b>

See footnotes at end of table.

**Table 14. Natural Gas Deliveries to Residential Consumers, by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1997					
	June	May	April	March	February	January
Alabama .....	1,604	2,638	3,180	5,326	9,098	9,290
Alaska .....	508	789	1,177	1,207	2,025	2,402
Arizona .....	1,154	1,571	2,259	4,235	5,092	5,978
Arkansas .....	1,240	2,324	3,293	4,942	7,754	8,285
California .....	23,572	28,707	39,271	48,377	66,688	75,103
Colorado .....	NA	NA	8,929	NA	NA	NA
Connecticut .....	1,380	2,332	4,378	5,176	6,538	6,255
Delaware .....	318	557	942	1,265	1,612	1,549
District of Columbia .....	562	944	1,316	2,049	2,655	2,708
Florida .....	856	944	1,013	1,279	2,068	2,167
Georgia .....	3,357	3,834	8,221	9,001	16,024	21,550
Hawaii .....	41	42	41	46	49	51
Idaho .....	433	939	1,464	1,909	2,542	2,564
Illinois .....	11,617	26,081	41,192	61,416	69,338	100,053
Indiana .....	4,958	9,482	15,219	20,684	26,294	32,779
Iowa .....	2,102	3,938	6,971	9,528	11,881	17,568
Kansas .....	<sup>R</sup> 1,652	3,581	6,402	8,769	12,105	15,803
Kentucky .....	1,572	2,954	4,883	7,293	8,964	13,942
Louisiana .....	2,050	2,824	3,680	5,619	8,991	9,736
Maine .....	34	56	85	142	133	166
Maryland .....	<sup>R</sup> 2,677	<sup>R</sup> 4,215	<sup>R</sup> 6,913	<sup>R</sup> 8,998	<sup>R</sup> 12,080	<sup>R</sup> 13,687
Massachusetts .....	4,370	6,917	12,122	15,127	17,654	NA
Michigan .....	12,010	26,958	38,256	51,299	57,545	66,871
Minnesota .....	3,499	6,775	11,435	16,959	19,966	25,740
Mississippi .....	920	1,463	1,904	3,038	4,968	5,050
Missouri .....	3,665	6,474	11,030	15,422	23,426	25,499
Montana .....	631	1,143	1,996	2,468	3,038	3,897
Nebraska .....	1,485	3,177	4,355	6,232	7,829	9,692
Nevada .....	981	1,419	2,018	3,172	3,825	4,470
New Hampshire .....	263	465	744	913	1,136	1,061
New Jersey .....	6,457	11,258	18,139	31,984	34,709	35,729
New Mexico .....	238	1,952	1,503	3,810	5,630	7,320
New York .....	NA	NA	NA	NA	NA	NA
North Carolina .....	1,599	2,991	4,087	5,811	10,002	10,050
North Dakota .....	333	730	1,178	1,576	1,984	2,313
Ohio .....	9,785	21,575	33,023	44,153	52,497	65,225
Oklahoma .....	2,105	3,857	6,160	9,070	12,687	13,920
Oregon .....	1,029	1,920	3,206	4,350	5,308	5,857
Pennsylvania .....	7,583	15,446	25,130	33,537	41,287	45,992
Rhode Island .....	727	1,171	1,994	2,462	2,891	2,890
South Carolina .....	701	1,230	1,776	2,592	4,994	5,097
South Dakota .....	368	784	1,250	1,625	2,089	2,735
Tennessee .....	NA	3,019	4,797	NA	12,086	12,795
Texas .....	7,595	10,420	14,025	22,686	33,154	42,706
Utah .....	1,601	1,821	4,875	5,945	8,366	9,876
Vermont .....	97	189	283	383	416	419
Virginia .....	2,054	4,227	6,662	9,123	11,741	13,126
Washington .....	3,055	5,591	4,586	8,132	9,377	10,885
West Virginia .....	961	2,246	3,421	4,318	5,630	5,969
Wisconsin .....	NA	NA	NA	17,386	19,810	26,165
Wyoming .....	<sup>R</sup> 395	1,076	1,058	<sup>R</sup> 1,544	<sup>R</sup> 1,660	<sup>R</sup> 2,243
<b>Total .....</b>	<sup>R</sup> 160,665	<sup>R</sup> 285,432	<sup>R</sup> 433,815	<sup>R</sup> 604,303	<sup>R</sup> 766,170	<sup>R</sup> 907,986

See footnotes at end of table.

**Table 14. Natural Gas Deliveries to Residential Consumers, by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1996					
	Total	December	November	October	September	August
Alabama .....	56,522	6,664	3,461	1,647	1,321	1,227
Alaska .....	16,179	2,181	1,708	1,238	589	544
Arizona .....	27,709	4,051	2,322	1,082	900	836
Arkansas .....	46,289	6,286	3,768	1,425	1,044	955
California .....	473,310	62,905	43,702	30,462	26,104	21,757
Colorado .....	110,924	15,814	9,571	4,886	2,773	2,505
Connecticut .....	43,764	5,842	3,522	1,840	992	954
Delaware .....	9,791	1,236	648	291	181	175
District of Columbia .....	17,290	2,406	1,252	578	401	380
Florida .....	16,293	1,583	972	752	690	658
Georgia .....	127,062	18,574	14,651	5,771	3,092	2,972
Hawaii .....	540	44	41	39	41	40
Idaho .....	14,941	2,224	1,570	646	364	277
Illinois .....	538,749	80,922	63,715	28,081	13,137	9,546
Indiana .....	179,939	26,087	18,577	7,846	3,617	3,117
Iowa .....	88,078	14,138	9,782	3,620	1,954	1,610
Kansas .....	85,376	14,388	9,447	3,163	1,973	1,640
Kentucky .....	70,232	10,177	9,022	3,018	1,389	1,253
Louisiana .....	56,626	6,173	3,511	2,102	1,836	1,831
Maine .....	967	120	105	67	28	23
Maryland .....	85,533	11,426	7,828	3,738	2,207	2,064
Massachusetts .....	114,365	13,947	9,943	5,012	2,677	2,463
Michigan .....	399,522	52,724	38,862	18,528	9,068	7,300
Minnesota .....	142,319	22,152	14,959	6,705	2,968	2,433
Mississippi .....	30,157	3,676	1,880	929	804	771
Missouri .....	137,225	20,539	11,687	4,321	2,749	2,448
Montana .....	22,175	3,286	2,458	1,267	634	431
Nebraska .....	48,989	7,283	4,043	2,173	1,017	932
Nevada .....	22,607	3,386	2,069	894	732	678
New Hampshire .....	7,012	855	667	312	169	155
New Jersey .....	222,619	29,983	18,933	9,917	5,472	4,715
New Mexico .....	33,689	5,663	3,689	1,330	844	836
New York .....	403,264	NA	NA	NA	NA	NA
North Carolina .....	58,812	8,607	4,461	1,701	913	862
North Dakota .....	12,591	1,894	1,256	554	256	209
Ohio .....	374,824	52,480	38,565	18,651	7,026	6,306
Oklahoma .....	76,629	11,298	5,722	2,267	1,679	1,515
Oregon .....	33,236	5,200	3,164	1,357	821	673
Pennsylvania .....	278,606	36,688	27,037	13,202	5,907	5,295
Rhode Island .....	18,839	2,350	1,416	738	467	450
South Carolina .....	29,406	4,336	2,168	800	476	419
South Dakota .....	14,085	2,243	1,414	578	316	231
Tennessee .....	70,423	10,177	5,949	1,987	1,190	1,101
Texas .....	229,318	33,952	17,793	9,479	7,495	6,534
Utah .....	54,344	8,203	5,749	4,215	2,540	1,416
Vermont .....	2,523	302	208	100	56	47
Virginia .....	76,214	10,946	7,388	2,879	1,414	1,424
Washington .....	62,689	9,804	6,207	2,930	1,572	1,250
West Virginia .....	37,390	5,166	3,391	1,609	696	537
Wisconsin .....	147,893	21,285	16,724	7,783	3,130	2,726
Wyoming .....	13,534	1,744	1,334	1,087	368	265
<b>Total .....</b>	<b>5,241,414</b>	<b>737,722</b>	<b>502,981</b>	<b>243,121</b>	<b>137,556</b>	<b>118,296</b>

See footnotes at end of table.

**Table 14. Natural Gas Deliveries to Residential Consumers, by State, 1995-1997**

(Million Cubic Feet) — Continued

State	1996					
	July	June	May	April	March	February
Alabama .....	1,295	1,472	2,948	6,321	8,051	11,222
Alaska .....	493	647	964	1,424	1,918	2,419
Arizona .....	916	1,089	1,328	2,155	3,366	4,221
Arkansas .....	930	1,202	1,967	4,846	6,146	8,713
California .....	18,649	25,996	30,001	36,723	52,226	58,007
Colorado .....	2,869	4,316	6,901	11,526	14,685	17,480
Connecticut .....	1,088	1,274	2,303	4,399	6,245	7,147
Delaware .....	196	310	516	1,116	1,504	1,918
District of Columbia .....	412	582	807	1,712	2,376	3,083
Florida .....	741	786	1,016	1,640	2,058	2,570
Georgia .....	3,179	3,115	4,272	9,875	17,871	19,358
Hawaii .....	42	45	44	49	53	51
Idaho .....	300	542	976	1,315	1,847	2,510
Illinois .....	11,346	12,437	27,063	43,288	71,599	81,430
Indiana .....	3,201	4,513	8,919	16,823	24,978	28,907
Iowa .....	1,663	2,343	4,187	6,945	11,830	13,725
Kansas .....	1,836	1,734	3,054	6,313	11,170	13,787
Kentucky .....	1,108	1,335	2,255	5,565	10,254	11,218
Louisiana .....	1,820	1,977	2,562	5,158	7,507	10,284
Maine .....	25	29	49	81	137	143
Maryland .....	2,139	2,709	4,136	7,257	11,806	14,280
Massachusetts .....	2,814	3,930	7,569	11,564	16,533	18,453
Michigan .....	7,657	10,619	24,645	40,288	57,657	63,693
Minnesota .....	2,583	3,708	7,335	12,254	19,126	22,665
Mississippi .....	816	839	1,366	3,174	3,851	5,900
Missouri .....	2,688	3,404	6,252	13,133	18,852	24,498
Montana .....	462	745	1,400	2,028	2,649	3,530
Nebraska .....	985	1,475	2,651	4,786	6,609	8,807
Nevada .....	779	1,011	1,264	1,884	2,903	3,264
New Hampshire .....	159	233	426	698	998	1,147
New Jersey .....	5,103	6,412	11,915	20,410	31,467	36,979
New Mexico .....	1,623	1,701	610	2,586	3,085	4,620
New York .....	10,129	14,186	25,231	41,232	57,763	61,203
North Carolina .....	889	1,210	2,131	6,189	7,391	11,718
North Dakota .....	212	356	736	1,320	1,764	2,079
Ohio .....	7,210	10,315	17,670	34,510	54,228	58,620
Oklahoma .....	1,628	1,989	3,321	7,697	10,164	14,497
Oregon .....	839	1,386	2,300	2,821	4,042	5,586
Pennsylvania .....	5,688	7,575	13,490	25,624	40,492	46,086
Rhode Island .....	484	692	1,216	1,901	2,664	3,119
South Carolina .....	425	547	954	2,996	3,741	5,943
South Dakota .....	239	464	803	1,367	1,865	2,221
Tennessee .....	1,166	1,327	2,355	7,058	9,516	13,801
Texas .....	7,216	7,819	9,574	19,123	28,242	35,808
Utah .....	1,533	1,351	2,252	4,540	5,419	8,571
Vermont .....	51	85	167	268	354	418
Virginia .....	1,502	2,088	2,536	6,501	11,185	13,709
Washington .....	1,628	2,610	4,456	5,418	7,642	10,162
West Virginia .....	590	817	1,652	3,877	5,495	6,602
Wisconsin .....	2,753	4,415	8,015	12,774	20,320	22,563
Wyoming .....	273	510	922	1,292	1,562	2,176
<b>Total</b> .....	<b>124,371</b>	<b>162,277</b>	<b>271,486</b>	<b>473,842</b>	<b>705,207</b>	<b>830,912</b>

<sup>R</sup> = Revised Data.

NA = Not Available.

Notes: Geographic coverage is the 50 States and the District of Columbia. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy.

Source: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

**Table 15. Natural Gas Deliveries to Commercial Consumers, by State, 1995-1997**  
(Million Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997		
				September	August	July
Alabama .....	25,852	22,485	19,227	2,375	3,087	3,497
Alaska .....	15,885	19,000	17,482	1,336	1,125	1,167
Arizona .....	22,765	21,518	21,650	1,839	1,770	1,939
Arkansas .....	21,444	23,311	19,650	1,133	1,132	1,133
California .....	187,357	170,193	208,519	18,468	18,728	17,971
Colorado .....	54,023	50,773	49,867	NA	NA	NA
Connecticut .....	29,771	29,372	28,730	1,560	1,754	1,895
Delaware .....	4,881	5,094	4,265	233	183	206
District of Columbia .....	12,488	12,023	12,931	852	853	783
Florida .....	27,921	31,845	30,490	2,561	2,651	2,578
Georgia .....	39,683	45,126	39,389	2,811	2,626	2,709
Hawaii .....	1,567	1,626	1,665	166	160	175
Idaho .....	8,163	8,180	7,472	NA	356	373
Illinois .....	142,799	148,324	138,780	6,546	5,935	6,084
Indiana .....	70,550	NA	56,395	2,667	2,551	2,428
Iowa .....	34,340	38,064	33,182	1,358	1,110	1,306
Kansas .....	35,494	41,118	36,303	2,087	1,865	1,957
Kentucky .....	26,177	28,400	25,547	1,268	967	1,176
Louisiana .....	19,892	20,237	17,987	1,744	1,195	1,350
Maine .....	1,874	1,804	1,654	91	78	72
Maryland .....	35,358	33,289	32,559	2,271	2,226	2,378
Massachusetts .....	78,612	69,284	59,053	5,488	5,776	5,555
Michigan .....	141,144	146,309	134,767	6,211	5,889	2,278
Minnesota .....	65,084	67,293	60,426	2,563	2,522	2,496
Mississippi .....	15,489	17,173	14,571	NA	NA	NA
Missouri .....	51,565	53,503	46,884	2,196	2,054	2,151
Montana .....	9,834	10,192	9,237	423	383	363
Nebraska .....	29,117	NA	NA	1,868	NA	NA
Nevada .....	16,188	14,918	14,237	1,192	1,145	1,097
New Hampshire .....	5,285	5,145	4,620	NA	217	216
New Jersey .....	106,088	111,281	100,958	6,062	5,793	6,094
New Mexico .....	18,612	19,098	17,535	1,020	997	984
New York .....	202,094	NA	165,324	NA	NA	NA
North Carolina .....	27,788	30,149	27,081	1,751	1,629	1,548
North Dakota .....	8,267	8,477	8,162	344	291	305
Ohio .....	125,823	136,847	120,945	4,083	3,557	3,288
Oklahoma .....	32,587	34,965	29,620	1,659	1,626	1,649
Oregon .....	18,660	18,383	16,406	1,023	912	1,007
Pennsylvania .....	102,648	109,042	94,638	5,298	3,779	4,680
Rhode Island .....	9,041	9,388	8,745	460	399	431
South Carolina .....	15,095	15,080	13,726	1,904	1,019	997
South Dakota .....	7,544	NA	7,450	334	250	246
Tennessee .....	41,282	42,952	36,063	2,120	2,064	2,090
Texas .....	151,154	137,480	157,200	15,035	15,234	15,315
Utah .....	20,771	20,066	18,590	1,124	943	927
Vermont .....	2,182	2,038	1,890	108	80	80
Virginia .....	43,938	42,634	40,208	2,392	2,449	2,370
Washington .....	37,786	34,327	30,939	NA	NA	NA
West Virginia .....	19,000	20,511	18,043	1,195	1,292	1,044
Wisconsin .....	62,820	64,725	55,427	2,638	NA	2,568
Wyoming .....	9,501	NA	NA	NA	R345	R943
<b>Total .....</b>	<b>2,293,285</b>	<b>2,283,280</b>	<b>2,143,906</b>	<b>139,738</b>	<b>R134,146</b>	<b>R132,572</b>

See footnotes at end of table.

**Table 15. Natural Gas Deliveries to Commercial Consumers, by State, 1995-1997**

(Million Cubic Feet) — Continued

State	1997					
	June	May	April	March	February	January
Alabama .....	1,779	2,020	2,194	2,613	4,063	4,224
Alaska .....	1,191	1,546	1,914	2,075	2,488	3,042
Arizona .....	1,976	2,141	2,563	3,153	3,525	3,858
Arkansas .....	1,219	1,653	2,172	3,149	4,730	5,123
California .....	16,572	18,994	21,091	23,612	26,107	25,816
Colorado .....	NA	NA	6,121	NA	NA	NA
Connecticut .....	1,986	2,586	4,055	4,797	5,346	5,792
Delaware .....	281	420	628	858	1,046	1,025
District of Columbia .....	951	1,373	842	2,183	2,316	2,335
Florida .....	2,917	2,902	3,017	3,307	3,862	4,126
Georgia .....	2,800	3,216	4,152	4,864	7,924	8,582
Hawaii .....	170	166	174	180	188	188
Idaho .....	399	686	1,041	1,345	1,784	1,816
Illinois .....	6,145	10,664	16,797	23,444	30,059	37,125
Indiana .....	6,344	9,965	7,610	10,465	12,807	15,715
Iowa .....	1,262	2,376	3,976	5,758	7,056	10,137
Kansas .....	1,451	2,798	4,004	6,012	8,130	7,190
Kentucky .....	1,181	1,890	2,913	4,093	5,483	7,206
Louisiana .....	1,408	1,492	1,837	3,313	3,574	3,979
Maine .....	92	152	231	378	348	433
Maryland .....	<sup>R</sup> 2,305	<sup>R</sup> 2,735	<sup>R</sup> 4,420	<sup>R</sup> 5,563	<sup>R</sup> 6,380	<sup>R</sup> 7,080
Massachusetts .....	7,151	6,266	9,068	11,630	13,854	13,824
Michigan .....	7,664	13,205	19,207	25,654	28,433	32,603
Minnesota .....	3,004	5,155	8,361	12,000	13,403	15,580
Mississippi .....	1,176	1,237	1,533	2,106	3,062	3,226
Missouri .....	2,457	3,569	5,786	7,970	12,828	12,556
Montana .....	451	714	1,342	1,652	1,947	2,558
Nebraska .....	1,468	NA	<sup>R</sup> 3,190	4,117	8,099	5,907
Nevada .....	1,409	1,666	1,896	2,442	2,629	2,711
New Hampshire .....	286	472	739	954	1,079	1,073
New Jersey .....	7,027	9,816	13,645	21,543	14,211	21,897
New Mexico .....	960	1,766	1,862	2,935	3,938	4,151
New York .....	NA	NA	NA	NA	NA	NA
North Carolina .....	1,770	2,401	2,973	3,806	5,850	6,059
North Dakota .....	343	619	1,095	1,408	1,879	1,982
Ohio .....	5,204	11,339	15,190	23,205	28,174	31,783
Oklahoma .....	1,517	2,617	3,571	5,041	7,183	7,724
Oregon .....	1,067	1,574	2,304	3,076	3,686	4,011
Pennsylvania .....	5,554	10,354	13,007	17,888	19,583	22,506
Rhode Island .....	537	892	1,144	1,740	1,744	1,694
South Carolina .....	1,214	1,278	1,379	1,816	2,689	2,799
South Dakota .....	283	604	940	1,235	1,607	2,045
Tennessee .....	NA	3,242	4,276	NA	9,488	9,084
Texas .....	11,993	NA	13,790	NA	21,368	27,444
Utah .....	946	1,268	2,675	3,363	4,473	5,051
Vermont .....	108	160	296	429	444	477
Virginia .....	2,681	4,381	5,762	7,212	8,021	8,670
Washington .....	2,917	4,098	4,100	5,627	6,275	7,474
West Virginia .....	1,181	1,693	2,222	2,816	3,652	3,903
Wisconsin .....	NA	NA	NA	11,297	12,587	16,141
Wyoming .....	<sup>R</sup> 633	<sup>R</sup> 1,065	<sup>R</sup> 1,445	<sup>R</sup> 1,593	<sup>R</sup> 1,423	<sup>R</sup> 1,681
<b>Total .....</b>	<sup>R</sup> 147,290	<sup>R</sup> 205,813	<sup>R</sup> 267,339	<sup>R</sup> 359,182	<sup>R</sup> 427,120	<sup>R</sup> 480,085

See footnotes at end of table.



**Table 15. Natural Gas Deliveries to Commercial Consumers, by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1996					
	Total	December	November	October	September	August
Alabama .....	29,002	3,123	1,991	1,402	1,207	1,133
Alaska .....	27,315	3,236	2,743	2,337	1,617	1,396
Arizona .....	29,102	3,259	2,461	1,748	1,680	1,753
Arkansas .....	31,009	3,876	2,462	1,356	1,106	1,060
California .....	236,332	24,836	21,313	18,727	17,544	17,540
Colorado .....	68,931	9,028	5,807	3,306	2,227	2,156
Connecticut .....	39,818	4,902	3,112	2,400	1,822	1,714
Delaware .....	6,695	821	502	277	223	203
District of Columbia .....	16,353	2,325	1,195	804	774	750
Florida .....	41,898	3,830	3,179	2,957	2,840	2,716
Georgia .....	61,377	7,462	5,450	3,339	2,673	2,594
Hawaii .....	2,132	176	160	170	171	166
Idaho .....	11,540	1,621	1,107	597	421	354
Illinois .....	218,086	32,425	25,216	12,090	7,125	5,314
Indiana .....	87,568	12,378	9,122	4,102	2,202	2,104
Iowa .....	54,576	8,510	5,896	2,101	1,926	1,080
Kansas .....	57,231	9,187	4,867	2,057	1,286	3,505
Kentucky .....	40,980	5,892	4,439	2,241	1,194	1,123
Louisiana .....	25,769	2,435	1,680	1,395	1,305	1,321
Maine .....	2,566	310	280	172	78	75
Maryland .....	45,891	5,433	4,693	2,427	1,922	1,866
Massachusetts .....	96,192	11,752	9,718	5,432	4,767	4,274
Michigan .....	201,431	26,123	19,486	9,472	6,146	5,383
Minnesota .....	98,580	15,009	10,756	5,479	2,867	2,254
Mississippi .....	22,230	2,333	1,631	1,088	1,078	1,198
Missouri .....	72,833	10,204	6,136	2,959	2,235	2,356
Montana .....	14,836	2,123	1,659	848	498	374
Nebraska .....	40,833	5,032	3,678	2,778	2,273	2,489
Nevada .....	20,469	2,417	1,817	1,269	1,116	1,062
New Hampshire .....	7,099	896	698	360	201	193
New Jersey .....	150,432	18,834	12,586	7,731	5,870	5,536
New Mexico .....	26,544	3,553	2,450	1,365	1,079	1,352
New York .....	253,129	NA	NA	NA	NA	NA
North Carolina .....	40,467	5,160	3,240	1,917	1,658	1,575
North Dakota .....	12,165	1,726	1,286	661	410	301
Ohio .....	190,195	26,298	18,274	8,548	4,048	4,401
Oklahoma .....	46,284	6,014	3,273	1,900	1,759	1,678
Oregon .....	25,622	3,595	2,314	1,306	1,023	905
Pennsylvania .....	154,677	22,333	15,107	8,161	4,302	4,365
Rhode Island .....	12,301	1,290	972	648	581	443
South Carolina .....	20,329	2,447	1,644	1,157	1,041	957
South Dakota .....	11,602	1,813	1,237	571	352	283
Tennessee .....	58,513	7,599	5,116	2,830	2,354	1,979
Texas .....	178,573	18,053	12,865	NA	8,830	12,079
Utah .....	29,666	4,220	3,185	2,073	1,279	874
Vermont .....	2,825	348	276	162	90	69
Virginia .....	59,294	7,489	5,776	3,363	2,401	2,081
Washington .....	48,252	6,623	4,489	2,701	1,920	1,697
West Virginia .....	28,030	3,400	2,494	1,620	1,171	1,259
Wisconsin .....	93,868	13,368	11,029	4,694	2,376	2,294
Wyoming .....	9,735	1,748	1,301	640	250	197
<b>Total .....</b>	<b>3,161,176</b>	<b>409,165</b>	<b>294,522</b>	<b>171,277</b>	<b>124,490</b>	<b>122,985</b>

See footnotes at end of table.

**Table 15. Natural Gas Deliveries to Commercial Consumers, by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1996					
	July	June	May	April	March	February
Alabama .....	1,169	1,234	1,716	2,881	3,735	4,849
Alaska .....	1,337	1,458	1,789	2,364	2,748	3,227
Arizona .....	1,779	1,987	2,110	2,532	2,984	3,107
Arkansas .....	1,056	1,052	1,519	2,964	3,895	5,249
California .....	17,155	15,772	16,348	17,358	21,723	23,098
Colorado .....	2,406	3,052	4,424	6,977	8,873	10,325
Connecticut .....	1,969	1,747	2,255	3,535	4,851	5,480
Delaware .....	202	245	365	691	885	1,181
District of Columbia .....	878	824	1,233	1,925	1,551	1,942
Florida .....	2,836	3,029	3,336	3,918	4,167	4,272
Georgia .....	2,737	2,508	3,297	5,425	7,564	8,514
Hawaii .....	176	176	172	190	184	192
Idaho .....	346	477	710	996	1,359	1,783
Illinois .....	5,426	5,695	9,659	17,937	27,306	33,140
Indiana .....	2,111	2,464	4,195	7,791	11,697	13,698
Iowa .....	1,212	1,664	2,734	4,783	7,103	8,342
Kansas .....	3,341	1,916	3,017	4,820	6,592	7,823
Kentucky .....	1,033	1,057	1,509	3,305	5,586	6,319
Louisiana .....	1,268	1,477	1,618	2,384	3,016	3,848
Maine .....	74	82	132	208	356	386
Maryland .....	1,608	1,816	2,672	3,766	5,476	6,515
Massachusetts .....	3,751	4,176	6,555	8,955	11,148	12,641
Michigan .....	5,673	6,343	12,272	19,664	27,914	30,447
Minnesota .....	2,377	3,072	5,383	8,798	12,931	13,918
Mississippi .....	1,156	1,069	1,256	1,987	2,558	3,345
Missouri .....	2,289	2,380	3,563	6,625	9,501	11,673
Montana .....	386	509	862	1,332	1,763	2,281
Nebraska .....	3,544	1,460	1,995	3,099	4,257	4,846
Nevada .....	1,145	1,286	1,454	1,811	2,268	2,309
New Hampshire .....	180	244	402	661	972	1,129
New Jersey .....	5,807	6,280	8,824	14,789	18,891	22,251
New Mexico .....	1,429	1,592	1,410	2,433	2,509	3,291
New York .....	NA	NA	NA	NA	NA	NA
North Carolina .....	1,415	1,586	1,970	3,760	4,851	6,421
North Dakota .....	271	348	677	1,142	1,713	1,769
Ohio .....	4,569	7,661	8,960	16,833	26,650	29,732
Oklahoma .....	1,798	1,770	2,222	4,413	5,595	7,923
Oregon .....	967	1,304	1,786	2,059	2,900	3,907
Pennsylvania .....	4,348	5,199	7,729	13,276	20,748	23,162
Rhode Island .....	421	446	757	1,251	1,606	1,919
South Carolina .....	940	997	1,154	1,884	2,190	2,782
South Dakota .....	288	385	619	1,059	1,487	1,685
Tennessee .....	1,962	2,145	2,682	5,317	7,255	9,287
Texas .....	12,459	12,257	14,205	17,134	20,685	17,619
Utah .....	904	892	1,356	2,479	3,129	4,604
Vermont .....	67	97	153	279	381	445
Virginia .....	2,517	2,928	3,465	5,137	7,357	8,172
Washington .....	1,857	2,672	3,434	4,147	5,450	6,833
West Virginia .....	1,317	1,062	1,511	2,457	3,393	3,959
Wisconsin .....	2,037	2,796	5,017	8,140	12,243	13,981
Wyoming .....	197	342	712	925	1,030	1,203
<b>Total .....</b>	<b>125,522</b>	<b>133,356</b>	<b>182,859</b>	<b>283,635</b>	<b>387,264</b>	<b>442,962</b>

<sup>R</sup> = Revised Data.

<sup>NA</sup> = Not Available.

Notes: Geographic coverage is the 50 States and the District of Columbia. Deliveries for total year 1996 may not equal the sum of the twelve months. Gas volumes delivered for use as vehicle fuel are included in the annual total but not in the monthly components. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy. In 1996, consumption of natural gas for agricultural use is classified as industrial use. In 1995 and earlier years, agricultural use was classified as commercial use. See Explanatory Note 5 for further explanation.

Source: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

**Table 16. Natural Gas Deliveries to Industrial Consumers, by State, 1995-1997**  
(Million Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997		
				September	August	July
Alabama .....	152,302	149,349	152,275	16,150	16,827	16,848
Alaska .....	55,103	55,711	52,137	4,233	6,395	5,968
Arizona .....	19,751	19,644	20,871	2,582	2,375	2,246
Arkansas .....	108,623	104,569	102,685	11,035	11,994	11,785
California .....	545,590	515,614	514,992	65,816	67,815	65,810
Colorado .....	61,948	63,400	57,691	NA	NA	NA
Connecticut .....	25,613	22,944	24,381	2,362	2,550	2,440
Delaware .....	10,731	10,498	14,760	1,107	1,017	1,106
District of Columbia .....	0	0	0	0	0	0
Florida .....	107,602	102,976	96,510	NA	11,529	12,164
Georgia .....	132,903	134,417	133,142	12,855	13,575	12,874
Hawaii .....	0	0	0	0	0	0
Idaho <sup>a</sup> .....	25,237	25,916	24,842	NA	2,371	2,723
Illinois .....	233,385	231,135	228,316	22,004	20,706	22,431
Indiana .....	203,800	NA	202,833	21,152	20,475	19,853
Iowa .....	80,659	82,402	82,871	8,468	8,680	7,768
Kansas .....	81,836	83,711	97,457	7,321	7,997	11,606
Kentucky .....	70,653	68,575	66,313	7,052	7,079	6,526
Louisiana .....	731,379	783,026	787,933	NA	84,275	NA
Maine .....	1,769	1,545	1,383	208	191	178
Maryland .....	43,069	36,889	37,281	4,427	<sup>R</sup> 5,019	<sup>R</sup> 4,767
Massachusetts .....	83,129	72,701	81,459	7,625	8,946	8,930
Michigan .....	242,658	259,173	241,444	23,655	23,705	16,029
Minnesota .....	74,195	72,676	77,463	7,183	7,771	6,780
Mississippi .....	56,724	60,514	63,191	NA	NA	NA
Missouri .....	51,758	53,903	50,185	4,322	4,338	4,492
Montana .....	12,596	12,896	12,916	1,290	1,253	1,093
Nebraska .....	22,428	26,009	34,417	2,050	2,524	986
Nevada .....	23,382	24,494	22,955	2,654	2,675	2,517
New Hampshire .....	4,676	3,512	3,392	NA	451	422
New Jersey .....	152,883	141,123	156,047	16,219	17,715	16,450
New Mexico .....	18,806	17,010	15,538	1,982	1,957	2,097
New York .....	246,010	239,034	205,077	26,560	NA	NA
North Carolina .....	86,718	74,380	79,438	9,017	9,696	9,102
North Dakota .....	8,388	5,347	4,728	754	817	473
Ohio .....	247,074	256,365	243,449	24,750	24,078	22,725
Oklahoma .....	158,046	149,199	146,340	16,687	17,620	16,618
Oregon .....	63,208	62,073	50,491	8,041	8,313	7,289
Pennsylvania .....	174,440	180,518	184,211	16,783	17,206	15,131
Rhode Island .....	18,634	NA	25,910	1,440	1,491	2,159
South Carolina .....	88,488	69,312	74,852	8,883	11,873	15,542
South Dakota .....	5,311	NA	4,960	470	499	322
Tennessee .....	110,040	91,214	93,159	13,313	13,153	10,831
Texas .....	1,528,044	NA	1,412,624	NA	172,857	166,725
Utah .....	31,430	31,264	31,794	2,497	3,369	3,482
Vermont .....	1,652	1,377	1,502	176	157	144
Virginia .....	64,436	61,021	73,234	6,951	8,927	8,064
Washington .....	82,446	82,958	80,875	NA	NA	NA
West Virginia .....	38,002	36,826	38,253	4,032	4,106	3,991
Wisconsin .....	113,865	107,425	104,181	10,184	10,528	10,056
Wyoming .....	34,231	NA	NA	NA	<sup>R</sup> 3,672	<sup>R</sup> 3,234
<b>Total .....</b>	<b>6,535,654</b>	<b>6,562,330</b>	<b>6,347,907</b>	<b>686,888</b>	<b><sup>R</sup>718,230</b>	<b><sup>R</sup>691,405</b>

See footnotes at end of table.

**Table 16. Natural Gas Deliveries to Industrial Consumers, by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1997					
	June	May	April	March	February	January
Alabama .....	16,253	17,284	18,182	16,885	16,341	17,534
Alaska .....	5,915	5,619	6,443	6,993	6,448	7,090
Arizona .....	2,170	2,332	1,989	2,071	1,944	2,041
Arkansas .....	11,598	11,903	12,008	12,361	12,195	13,744
California .....	58,874	58,119	57,480	57,065	55,756	58,855
Colorado .....	NA	NA	6,831	NA	NA	NA
Connecticut .....	2,441	2,870	3,308	3,521	3,031	3,088
Delaware .....	1,156	1,308	1,354	1,249	1,192	1,243
District of Columbia .....	0	0	0	0	0	0
Florida .....	11,539	12,515	12,365	11,905	11,527	12,521
Georgia .....	12,448	16,828	16,740	16,153	16,385	15,044
Hawaii .....	0	0	0	0	0	0
Idaho <sup>a</sup> .....	2,724	2,673	3,180	3,200	2,802	3,166
Illinois .....	22,272	25,139	26,550	29,761	31,673	32,850
Indiana .....	17,289	19,839	23,608	26,703	25,597	29,284
Iowa .....	7,823	8,516	9,081	9,800	9,785	10,738
Kansas .....	8,283	8,904	8,519	9,297	8,058	11,851
Kentucky .....	6,669	7,704	7,769	8,408	8,964	10,483
Louisiana .....	81,658	82,682	81,401	76,376	NA	83,077
Maine .....	197	226	247	182	162	180
Maryland .....	<sup>R</sup> 5,126	<sup>R</sup> 4,734	<sup>R</sup> 4,495	<sup>R</sup> 5,528	<sup>R</sup> 4,661	<sup>R</sup> 4,312
Massachusetts .....	10,487	8,389	10,392	10,520	10,375	7,465
Michigan .....	25,327	27,343	27,854	32,629	32,134	33,982
Minnesota .....	7,681	7,566	8,338	9,333	10,082	9,463
Mississippi .....	6,054	5,804	6,535	6,721	6,686	7,337
Missouri .....	4,810	4,987	7,149	5,099	9,463	7,097
Montana .....	1,176	1,365	1,178	1,695	1,634	1,913
Nebraska .....	2,116	2,465	3,051	3,167	3,090	2,979
Nevada .....	2,519	2,791	2,424	2,665	2,462	2,675
New Hampshire .....	434	905	632	570	411	411
New Jersey .....	15,822	16,773	16,587	18,406	15,694	19,217
New Mexico .....	2,041	2,123	1,935	1,944	2,119	2,608
New York .....	NA	NA	NA	NA	NA	NA
North Carolina .....	9,195	9,687	10,561	10,341	9,950	9,168
North Dakota .....	707	911	867	1,574	1,253	1,033
Ohio .....	22,461	26,644	27,049	30,688	32,631	36,048
Oklahoma .....	17,536	17,339	17,335	17,207	18,790	18,914
Oregon .....	5,557	6,033	6,322	6,726	6,525	8,402
Pennsylvania .....	16,359	18,780	21,556	22,001	23,241	23,384
Rhode Island .....	2,265	2,401	2,514	2,241	1,993	2,131
South Carolina .....	8,451	9,122	9,260	9,152	8,054	8,152
South Dakota .....	492	531	624	705	792	877
Tennessee .....	NA	11,767	12,548	NA	12,789	11,698
Texas .....	165,999	166,759	164,032	182,742	160,683	187,054
Utah .....	3,408	3,633	3,757	3,777	3,698	3,809
Vermont .....	146	218	200	234	197	181
Virginia .....	5,864	7,452	6,449	4,162	8,056	8,513
Washington .....	8,005	8,513	8,189	9,259	9,170	9,112
West Virginia .....	3,905	4,439	6,731	2,577	3,836	4,386
Wisconsin .....	NA	11,889	NA	15,238	14,667	17,601
Wyoming .....	<sup>R</sup> 3,858	<sup>R</sup> 4,125	<sup>R</sup> 3,864	<sup>R</sup> 3,795	<sup>R</sup> 3,792	<sup>R</sup> 5,060
<b>Total</b> .....	<sup>R</sup> 680,290	<sup>R</sup> 713,368	<sup>R</sup> 730,795	<sup>R</sup> 763,971	<sup>R</sup> 746,663	<sup>R</sup> 804,045

See footnotes at end of table.

**Table 16. Natural Gas Deliveries to Industrial Consumers, by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1996					
	Total	December	November	October	September	August
Alabama .....	201,414	17,016	16,951	18,097	16,712	15,966
Alaska .....	75,616	7,034	6,450	6,421	6,288	6,961
Arizona .....	26,979	2,536	2,436	2,363	2,246	2,125
Arkansas .....	141,300	12,552	12,171	12,008	10,821	11,492
California .....	693,539	61,618	59,107	57,199	57,688	62,705
Colorado .....	83,640	7,861	7,271	5,109	6,270	7,792
Connecticut .....	32,451	3,013	3,386	3,108	2,589	2,561
Delaware .....	14,164	1,148	1,180	1,338	1,138	1,116
District of Columbia .....	0	0	0	0	0	0
Florida .....	136,722	11,160	11,655	10,931	11,324	11,135
Georgia .....	181,768	15,926	15,856	15,569	15,136	15,887
Hawaii .....	0	0	0	0	0	0
Idaho <sup>a</sup> .....	34,577	2,891	2,747	3,023	2,802	2,409
Illinois .....	322,275	35,802	30,672	24,666	19,734	20,575
Indiana .....	289,219	25,886	24,549	23,056	20,528	19,795
Iowa .....	113,995	10,955	11,178	9,460	7,445	8,696
Kansas .....	110,294	9,372	9,897	7,314	8,141	9,817
Kentucky .....	94,481	9,646	8,705	7,555	6,589	6,259
Louisiana .....	1,048,432	86,865	NA	NA	87,576	87,989
Maine .....	2,190	171	234	239	185	177
Maryland .....	50,022	4,956	3,981	4,196	4,055	4,335
Massachusetts .....	100,015	9,252	8,643	9,419	8,119	9,040
Michigan .....	347,043	32,754	29,990	25,126	24,187	23,728
Minnesota .....	102,471	9,903	10,656	9,236	7,719	7,451
Mississippi .....	80,887	6,503	6,507	7,363	6,432	6,200
Missouri .....	71,533	6,510	6,157	4,963	4,540	5,883
Montana .....	18,103	1,985	1,668	1,554	1,382	1,429
Nebraska .....	36,125	3,689	3,179	3,248	2,452	2,467
Nevada .....	32,606	2,859	2,705	2,548	2,728	2,787
New Hampshire .....	4,916	404	529	471	392	393
New Jersey .....	200,933	27,230	17,727	14,853	14,574	11,728
New Mexico .....	22,858	2,173	1,875	1,799	1,751	1,774
New York .....	322,661	31,374	26,765	25,488	25,312	26,927
North Carolina .....	104,124	9,413	9,964	10,368	8,412	8,358
North Dakota .....	7,911	924	955	685	552	425
Ohio .....	347,149	33,111	30,242	27,432	22,996	23,427
Oklahoma .....	201,024	19,194	15,941	16,689	16,741	17,073
Oregon .....	87,754	8,498	8,526	8,657	7,954	7,886
Pennsylvania .....	243,499	21,089	22,617	19,275	17,697	18,213
Rhode Island .....	25,829	2,553	2,992	3,189	2,921	2,998
South Carolina .....	95,493	8,646	8,699	8,836	7,982	8,162
South Dakota .....	7,182	715	694	523	427	471
Tennessee .....	126,545	12,264	12,388	10,679	10,240	9,810
Texas .....	2,138,155	181,384	171,353	181,999	186,067	171,985
Utah .....	42,213	3,693	3,663	3,592	3,436	3,374
Vermont .....	1,953	191	211	174	151	155
Virginia .....	84,357	9,782	7,474	6,080	5,162	7,113
Washington .....	114,236	9,758	10,859	10,660	10,161	9,892
West Virginia .....	49,997	4,443	4,418	4,310	4,596	3,932
Wisconsin .....	149,517	15,456	14,652	11,984	9,773	9,274
Wyoming .....	50,253	4,647	4,741	4,678	3,699	3,851
<b>Total .....</b>	<b>8,870,422</b>	<b>806,805</b>	<b>764,387</b>	<b>736,900</b>	<b>705,823</b>	<b>703,997</b>

See footnotes at end of table.

**Table 16. Natural Gas Deliveries to Industrial Consumers, by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1996					
	July	June	May	April	March	February
Alabama .....	16,304	15,508	16,367	16,867	17,001	16,916
Alaska .....	6,577	6,268	5,808	6,123	6,764	6,115
Arizona .....	2,175	2,126	1,640	2,330	2,403	2,150
Arkansas .....	11,423	11,344	10,729	11,412	12,152	12,114
California .....	58,086	52,431	58,146	56,490	53,746	56,969
Colorado .....	7,657	5,366	5,700	7,856	7,559	9,380
Connecticut .....	2,311	2,438	2,423	2,778	2,989	2,731
Delaware .....	1,122	1,303	1,206	1,046	1,314	1,082
District of Columbia .....	0	0	0	0	0	0
Florida .....	11,167	10,635	12,532	11,288	11,402	10,691
Georgia .....	13,599	14,461	15,625	15,871	15,818	12,677
Hawaii .....	0	0	0	0	0	0
Idaho <sup>a</sup> .....	2,697	2,699	2,850	2,856	3,207	3,062
Illinois .....	18,553	20,876	24,750	26,670	31,101	31,953
Indiana .....	20,302	42,381	8,491	23,219	26,554	25,931
Iowa .....	8,238	8,322	9,074	9,594	10,302	9,621
Kansas .....	9,579	9,392	8,177	9,070	9,649	9,534
Kentucky .....	6,006	8,486	6,325	7,365	8,704	8,459
Louisiana .....	87,008	90,218	87,124	86,136	89,479	81,114
Maine .....	144	186	181	155	182	164
Maryland .....	4,202	3,918	4,016	4,940	4,643	3,226
Massachusetts .....	7,437	7,365	6,897	8,263	8,737	7,953
Michigan .....	24,101	25,308	27,715	30,370	34,729	34,973
Minnesota .....	7,596	7,500	7,602	8,293	8,985	8,237
Mississippi .....	6,446	6,233	6,383	6,796	7,165	6,956
Missouri .....	4,219	4,744	5,645	6,518	7,064	7,267
Montana .....	1,267	1,215	1,331	1,356	1,484	1,563
Nebraska .....	2,479	2,616	2,652	3,106	3,337	3,246
Nevada .....	2,862	2,723	2,873	2,538	2,664	2,557
New Hampshire .....	371	378	434	434	418	335
New Jersey .....	16,131	14,290	16,050	17,290	16,918	16,031
New Mexico .....	1,801	1,855	1,630	1,967	1,792	2,177
New York .....	25,513	25,268	23,861	26,802	27,499	27,182
North Carolina .....	8,237	8,249	8,608	9,026	9,179	6,639
North Dakota .....	401	530	668	719	748	637
Ohio .....	22,090	28,997	26,200	28,656	31,419	34,042
Oklahoma .....	16,822	14,616	15,859	14,961	17,627	16,698
Oregon .....	7,326	6,794	6,702	5,968	6,373	6,161
Pennsylvania .....	16,820	18,056	19,705	20,625	23,261	22,078
Rhode Island .....	1,684	2,159	2,128	1,975	485	354
South Carolina .....	7,955	7,868	8,550	8,454	7,781	6,388
South Dakota .....	461	456	473	497	1,223	688
Tennessee .....	9,723	9,956	9,308	9,854	10,161	10,267
Texas .....	163,216	172,584	180,659	179,407	191,706	176,010
Utah .....	3,253	3,162	3,364	3,424	3,625	3,709
Vermont .....	107	154	178	135	226	150
Virginia .....	6,792	4,243	7,255	6,290	9,169	7,248
Washington .....	8,911	7,653	8,599	8,797	9,097	9,801
West Virginia .....	3,912	3,706	3,925	3,953	4,340	4,065
Wisconsin .....	8,609	8,845	10,786	12,912	15,305	14,831
Wyoming .....	3,568	4,082	3,988	4,135	3,974	4,931
<b>Total</b> .....	<b>677,260</b>	<b>709,964</b>	<b>701,193</b>	<b>735,588</b>	<b>781,460</b>	<b>747,065</b>

<sup>a</sup> Small volumes of natural gas representing onsystem sales to industrial consumers in Idaho are included in the annual total but not in monthly components. Deliveries for total year 1995 in Idaho do not equal the sum of the twelve months.

<sup>R</sup> = Revised Data.

<sup>NA</sup> = Not Available.

Notes: Geographic coverage is the 50 States and the District of Columbia. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy. In 1996, consumption of natural gas for agricultural use is classified as industrial use. In 1995 and earlier years, agricultural use was classified as commercial use. See Explanatory Note 5 for further explanation.

Source: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

**Table 17. Natural Gas Deliveries to Electric Utility<sup>a</sup> Consumers,  
by State, 1995-1997**  
(Million Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997		
				September	August	July
Alabama .....	8,770	4,991	6,784	1,247	2,373	2,901
Alaska .....	25,129	23,369	22,495	2,295	2,439	2,736
Arizona .....	20,695	16,267	17,459	5,105	4,809	4,118
Arkansas .....	22,123	32,264	29,256	3,419	5,336	7,586
California .....	294,165	245,499	305,573	56,542	48,250	43,994
Colorado .....	4,095	4,232	2,967	672	721	710
Connecticut .....	12,524	7,770	17,339	1,725	2,303	2,416
Delaware .....	14,359	17,862	20,212	667	1,592	2,003
District of Columbia .....	0	0	0	0	0	0
Florida .....	237,718	223,848	245,455	26,634	33,367	33,080
Georgia .....	6,855	4,542	7,571	1,158	2,197	2,592
Hawaii .....	0	0	0	0	0	0
Idaho .....	0	0	0	0	0	0
Illinois .....	32,249	22,409	31,689	2,400	3,847	8,073
Indiana .....	4,027	3,694	6,809	243	480	1,690
Iowa .....	3,394	2,811	3,125	247	393	887
Kansas .....	18,532	20,550	25,175	2,092	3,457	6,295
Kentucky .....	1,647	1,585	542	181	311	525
Louisiana .....	223,854	205,383	258,291	30,524	34,549	39,943
Maine .....	0	0	0	0	0	0
Maryland .....	9,687	7,495	17,625	623	1,051	3,382
Massachusetts .....	42,620	31,747	53,802	4,783	5,577	6,018
Michigan .....	24,083	23,815	26,507	2,944	2,874	3,708
Minnesota .....	5,484	4,010	7,019	290	671	1,139
Mississippi .....	59,032	67,626	93,247	8,117	11,936	14,015
Missouri .....	6,303	4,722	11,679	754	1,220	2,812
Montana .....	329	271	314	27	46	116
Nebraska .....	2,225	2,052	2,278	267	370	892
Nevada .....	41,971	37,731	31,848	6,211	7,832	7,265
New Hampshire .....	504	2	2,237	60	77	12
New Jersey .....	25,562	22,861	38,991	1,349	4,239	8,152
New Mexico .....	25,933	22,515	26,140	2,834	4,338	4,026
New York .....	168,396	112,406	201,284	19,107	28,874	34,220
North Carolina .....	3,977	2,266	2,771	433	747	1,889
North Dakota .....	1	3	1	0	0	1
Ohio .....	2,699	2,446	6,562	266	301	1,065
Oklahoma .....	99,613	112,867	128,600	14,088	20,598	20,971
Oregon .....	6,710	9,342	14,042	2,758	2,950	357
Pennsylvania .....	6,495	5,653	22,522	418	923	2,725
Rhode Island .....	19,569	18,031	944	2,365	2,424	2,005
South Carolina .....	2,344	1,147	5,530	212	422	922
South Dakota .....	1,513	605	838	88	228	582
Tennessee .....	1,427	571	2,055	0	328	844
Texas .....	823,855	853,351	855,019	126,080	141,938	144,610
Utah .....	3,087	3,024	7,202	784	934	709
Vermont .....	26	15	75	2	4	4
Virginia .....	8,859	9,276	13,253	545	1,378	2,371
Washington .....	2,047	5,410	4,942	1,191	731	25
West Virginia .....	188	158	302	15	9	23
Wisconsin .....	14,233	5,226	7,970	700	899	2,180
Wyoming .....	59	68	102	5	3	4
<b>Total .....</b>	<b>2,338,967</b>	<b>2,203,789</b>	<b>2,586,445</b>	<b>332,464</b>	<b>390,347</b>	<b>426,594</b>

See footnotes at end of table.

**Table 17. Natural Gas Deliveries to Electric Utility<sup>a</sup> Consumers,  
by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1997					
	June	May	April	March	February	January
Alabama .....	931	483	386	168	156	125
Alaska .....	2,580	2,903	2,924	3,594	2,439	3,220
Arizona .....	1,932	2,742	723	588	358	319
Arkansas .....	3,488	583	614	253	217	626
California .....	26,546	37,243	25,412	24,423	14,231	17,524
Colorado .....	340	397	267	328	261	398
Connecticut .....	1,366	1,141	1,229	944	1,208	192
Delaware .....	1,097	1,064	1,841	2,280	2,069	1,746
District of Columbia .....	0	0	0	0	0	0
Florida .....	31,138	29,415	27,872	28,725	17,001	10,485
Georgia .....	439	203	176	30	18	42
Hawaii .....	0	0	0	0	0	0
Idaho .....	0	0	0	0	0	0
Illinois .....	4,639	2,931	4,976	2,503	1,679	1,201
Indiana .....	721	210	200	199	137	147
Iowa .....	416	286	269	405	231	261
Kansas .....	3,113	1,226	840	553	409	547
Kentucky .....	170	21	117	130	80	111
Louisiana .....	29,948	25,570	19,113	15,854	13,608	14,747
Maine .....	0	0	0	0	0	0
Maryland .....	1,857	726	1,478	337	47	185
Massachusetts .....	6,206	3,811	6,611	5,258	2,785	1,570
Michigan .....	2,776	2,772	2,282	2,434	2,375	1,916
Minnesota .....	687	596	621	698	124	658
Mississippi .....	8,386	4,689	3,034	2,932	2,717	3,207
Missouri .....	1,029	96	175	78	53	86
Montana .....	8	7	15	18	27	64
Nebraska .....	221	110	174	82	78	31
Nevada .....	5,272	5,220	3,518	3,822	1,363	1,468
New Hampshire .....	353	0	0	0	0	0
New Jersey .....	4,613	1,480	1,869	2,092	1,023	746
New Mexico .....	2,923	2,445	2,548	2,769	1,991	2,059
New York .....	27,370	16,444	11,135	14,307	12,117	4,823
North Carolina .....	811	61	26	1	9	0
North Dakota .....	0	0	0	0	0	0
Ohio .....	591	105	106	71	71	124
Oklahoma .....	12,311	6,747	7,058	6,712	4,867	6,260
Oregon .....	147	3	0	200	0	295
Pennsylvania .....	886	295	326	324	316	281
Rhode Island .....	2,185	2,447	1,854	2,180	2,021	2,088
South Carolina .....	621	67	72	12	4	11
South Dakota .....	360	85	85	39	19	26
Tennessee .....	255	0	0	0	0	0
Texas .....	103,342	73,272	59,323	60,401	54,897	59,992
Utah .....	22	126	123	134	118	138
Vermont .....	3	3	3	3	2	2
Virginia .....	1,262	626	1,398	1,058	44	178
Washington .....	1	86	5	0	2	6
West Virginia .....	40	33	9	23	23	12
Wisconsin .....	1,695	1,861	1,777	2,165	1,782	1,174
Wyoming .....	13	6	6	6	7	9
<b>Total .....</b>	<b>295,112</b>	<b>230,637</b>	<b>192,593</b>	<b>189,131</b>	<b>142,984</b>	<b>139,104</b>

See footnotes at end of table.



**Table 17. Natural Gas Deliveries to Electric Utility<sup>a</sup> Consumers,  
by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1996					
	Total	December	November	October	September	August
Alabama .....	6,146	291	480	384	593	708
Alaska .....	31,767	3,078	2,683	2,637	2,449	2,595
Arizona .....	19,248	443	296	2,242	2,145	4,797
Arkansas .....	33,988	1,226	297	201	4,215	5,421
California .....	318,035	17,182	22,900	32,454	35,564	53,941
Colorado .....	5,511	454	319	506	724	798
Connecticut .....	10,456	131	912	1,643	2,168	2,269
Delaware .....	23,370	1,048	2,129	2,330	2,562	2,416
District of Columbia .....	0	0	0	0	0	0
Florida .....	283,557	13,124	17,908	28,677	33,595	33,376
Georgia .....	4,674	43	80	9	243	588
Hawaii .....	0	0	0	0	0	0
Idaho .....	0	0	0	0	0	0
Illinois .....	25,863	550	1,859	1,046	2,309	4,289
Indiana .....	4,330	236	256	144	197	570
Iowa .....	3,491	236	232	211	277	298
Kansas .....	22,607	672	578	808	1,959	4,148
Kentucky .....	1,836	82	104	65	83	281
Louisiana .....	252,139	12,921	14,958	18,877	21,484	32,455
Maine .....	0	0	0	0	0	0
Maryland .....	8,455	211	263	485	1,521	1,920
Massachusetts .....	45,037	1,562	3,081	8,648	9,009	7,190
Michigan .....	32,559	2,888	3,151	2,705	3,320	2,746
Minnesota .....	5,301	419	403	469	602	624
Mississippi .....	83,251	3,671	6,561	5,392	9,812	12,074
Missouri .....	5,223	69	238	193	287	896
Montana .....	470	72	85	42	35	23
Nebraska .....	2,351	82	94	122	161	213
Nevada .....	46,766	2,311	2,458	4,266	4,900	6,394
New Hampshire .....	3	0	1	0	0	0
New Jersey .....	25,825	445	1,038	1,481	3,575	4,064
New Mexico .....	29,969	2,244	2,423	2,787	2,492	3,456
New York .....	142,688	5,108	10,715	14,459	21,421	24,086
North Carolina .....	2,381	1	1	112	75	196
North Dakota .....	3	0	0	0	1	1
Ohio .....	2,867	106	259	56	257	593
Oklahoma .....	136,436	6,107	8,068	9,395	13,201	19,557
Oregon .....	14,015	334	1,289	3,049	3,801	3,202
Pennsylvania .....	7,239	282	654	650	1,150	1,778
Rhode Island .....	25,071	2,167	2,449	2,424	2,236	2,417
South Carolina .....	1,206	20	16	23	350	64
South Dakota .....	725	35	80	5	76	178
Tennessee .....	572	0	1	0	79	240
Texas .....	1,039,155	51,332	59,062	75,410	90,570	119,967
Utah .....	3,428	142	130	133	554	870
Vermont .....	24	3	3	3	3	2
Virginia .....	10,275	333	193	473	1,677	1,578
Washington .....	6,590	21	358	801	2,251	2,558
West Virginia .....	205	43	3	1	26	15
Wisconsin .....	7,303	702	803	572	739	1,198
Wyoming .....	87	6	6	7	8	9
<b>Total .....</b>	<b>2,732,496</b>	<b>132,434</b>	<b>169,879</b>	<b>226,394</b>	<b>284,758</b>	<b>367,059</b>

See footnotes at end of table.

**Table 17. Natural Gas Deliveries to Electric Utility<sup>a</sup> Consumers,  
by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1996					
	July	June	May	April	March	February
Alabama .....	1,457	931	840	112	134	125
Alaska .....	2,514	2,611	2,592	2,434	2,763	2,573
Arizona .....	3,286	1,940	1,047	828	649	550
Arkansas .....	7,029	5,722	4,342	3,663	1,181	433
California .....	42,047	23,684	18,648	18,202	13,728	15,742
Colorado .....	665	400	584	246	317	305
Connecticut .....	1,409	951	595	298	28	27
Delaware .....	2,342	2,724	1,189	1,291	1,742	939
District of Columbia .....	0	0	0	0	0	0
Florida .....	29,468	28,311	31,435	21,801	15,773	13,992
Georgia .....	1,514	1,010	1,000	61	98	15
Hawaii .....	0	0	0	0	0	0
Idaho .....	0	0	0	0	0	0
Illinois .....	4,369	4,205	2,562	2,103	856	421
Indiana .....	483	746	506	248	233	337
Iowa .....	355	545	435	289	274	162
Kansas .....	4,884	4,175	1,661	728	726	701
Kentucky .....	249	235	236	139	119	56
Louisiana .....	35,959	31,317	26,523	13,556	15,080	14,146
Maine .....	0	0	0	0	0	0
Maryland .....	1,273	1,278	980	220	126	69
Massachusetts .....	3,508	3,616	2,443	2,108	1,485	1,435
Michigan .....	2,767	3,062	2,613	2,011	2,100	2,214
Minnesota .....	690	699	273	342	351	200
Mississippi .....	10,509	11,998	8,484	4,734	3,311	2,838
Missouri .....	1,152	1,011	802	184	111	134
Montana .....	45	52	8	4	37	23
Nebraska .....	348	466	320	202	139	80
Nevada .....	6,552	4,802	4,271	2,737	2,474	2,488
New Hampshire .....	0	0	0	0	0	0
New Jersey .....	4,441	4,207	1,984	647	483	1,291
New Mexico .....	3,480	2,895	3,067	1,997	2,383	861
New York .....	18,789	16,773	13,132	5,595	5,703	3,392
North Carolina .....	766	802	377	3	3	9
North Dakota .....	0	1	0	0	0	0
Ohio .....	312	477	426	46	58	90
Oklahoma .....	19,747	17,701	12,313	7,340	7,490	6,910
Oregon .....	2,339	0	0	0	0	0
Pennsylvania .....	676	591	506	262	225	120
Rhode Island .....	2,031	2,045	2,011	1,700	2,395	1,523
South Carolina .....	239	278	188	9	9	5
South Dakota .....	155	174	2	3	6	10
Tennessee .....	130	78	15	0	29	0
Texas .....	136,109	114,370	114,229	72,920	72,619	61,382
Utah .....	810	227	8	128	137	151
Vermont .....	3	4	0	2	0	0
Virginia .....	1,704	1,532	860	107	314	505
Washington .....	451	0	1	0	57	26
West Virginia .....	11	21	9	16	13	16
Wisconsin .....	532	772	696	229	353	271
Wyoming .....	4	17	5	5	8	5
<b>Total .....</b>	<b>357,604</b>	<b>299,454</b>	<b>264,216</b>	<b>169,550</b>	<b>156,120</b>	<b>136,572</b>

<sup>a</sup> Includes all steam electric utility generating plants with a combined capacity of 50 megawatts or greater.

Notes: Geographic coverage is the 50 States and the District of Columbia. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy.

Source: Form EIA-759, "Monthly Power Plant Report."

**Table 18. Natural Gas Deliveries to All Consumers, by State, 1995-1997**  
(Million Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997		
				September	August	July
Alabama .....	221,940	221,575	214,849	21,022	23,524	24,638
Alaska .....	105,834	109,131	102,773	8,607	10,360	10,334
Arizona .....	86,557	77,684	81,139	10,653	9,864	9,323
Arkansas .....	182,923	194,954	180,847	16,537	19,380	21,532
California .....	1,378,393	1,267,548	1,391,459	162,598	155,744	154,614
Colorado .....	199,775	199,057	188,263	NA	15,219	16,390
Connecticut .....	96,818	92,647	99,957	6,648	7,510	7,699
Delaware .....	36,767	41,071	45,680	2,190	2,970	3,508
District of Columbia .....	23,907	25,078	24,344	1,245	1,226	1,202
Florida .....	383,794	371,656	383,538	NA	48,290	48,608
Georgia .....	250,758	272,152	252,387	20,015	21,341	21,371
Hawaii .....	1,960	2,042	2,106	206	201	218
Idaho .....	44,206	44,597	41,577	NA	3,021	3,441
Illinois .....	750,316	767,898	727,068	42,647	40,598	46,966
Indiana .....	397,124	408,704	375,032	27,553	26,494	26,823
Iowa .....	175,091	183,816	172,142	11,718	11,655	11,554
Kansas .....	189,279	203,756	210,976	13,128	14,935	21,720
Kentucky .....	142,029	146,576	133,872	9,949	9,434	9,646
Louisiana .....	1,013,077	1,053,487	1,102,950	NA	121,689	124,542
Maine .....	4,337	4,024	3,654	329	294	271
Maryland .....	142,458	140,214	140,505	9,388	<sup>R</sup> 10,095	<sup>R</sup> 12,434
Massachusetts .....	285,135	259,195	271,128	20,450	22,736	23,334
Michigan .....	681,603	718,705	664,110	41,577	39,732	26,763
Minnesota .....	237,262	242,481	230,641	12,899	13,520	13,121
Mississippi .....	150,877	168,986	190,800	NA	19,986	22,094
Missouri .....	202,886	212,806	198,578	9,897	10,016	12,172
Montana .....	37,298	38,523	35,787	2,248	2,129	1,983
Nebraska .....	89,429	92,894	NA	5,122	<sup>R</sup> 4,852	<sup>R</sup> 3,910
Nevada .....	99,892	93,400	85,203	10,859	12,429	11,767
New Hampshire .....	15,537	13,838	14,962	NA	901	811
New Jersey .....	437,900	439,053	431,616	28,939	32,427	35,798
New Mexico .....	86,293	81,631	78,988	6,667	8,135	7,921
New York .....	910,189	833,227	844,035	NA	75,891	82,575
North Carolina .....	155,931	150,837	144,241	12,136	12,972	13,613
North Dakota .....	25,433	22,715	20,887	1,327	1,314	1,006
Ohio .....	622,817	660,786	610,587	36,327	34,138	34,610
Oklahoma .....	342,790	354,372	355,937	33,982	41,364	40,916
Oregon .....	112,492	113,313	101,309	12,559	12,845	9,490
Pennsylvania .....	468,741	496,893	480,601	28,814	26,622	27,689
Rhode Island .....	60,775	58,850	48,300	4,738	4,757	5,075
South Carolina .....	123,738	107,642	111,942	11,464	13,758	17,974
South Dakota .....	23,961	23,683	21,993	1,153	1,210	1,398
Tennessee .....	198,419	187,047	172,674	16,619	16,625	14,884
Texas .....	2,652,984	2,762,345	2,573,739	NA	336,130	333,478
Utah .....	92,697	90,531	90,806	6,362	6,712	6,619
Vermont .....	5,814	5,344	5,150	345	293	285
Virginia .....	168,855	167,932	173,351	11,527	14,228	14,380
Washington .....	171,042	166,442	153,781	NA	15,634	13,007
West Virginia .....	81,602	84,719	81,044	6,025	6,001	5,547
Wisconsin .....	285,342	279,477	256,827	16,447	16,401	17,555
Wyoming .....	52,645	51,656	NA	NA	<sup>R</sup> 4,271	<sup>R</sup> 4,475
<b>Total .....</b>	<b>14,707,722</b>	<b>14,806,988</b>	<b>14,465,507</b>	<b>1,290,877</b>	<b><sup>R</sup>1,361,871</b>	<b><sup>R</sup>1,381,081</b>

See footnotes at end of table.

**Table 18. Natural Gas Deliveries to All Consumers, by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1997					
	June	May	April	March	February	January
Alabama .....	20,567	22,424	23,942	24,993	29,657	31,172
Alaska .....	10,194	10,857	12,458	13,869	13,399	15,754
Arizona .....	7,232	8,786	7,535	10,047	10,920	12,196
Arkansas .....	17,545	16,464	18,087	20,705	24,896	27,778
California .....	125,563	143,063	143,256	153,477	162,782	177,297
Colorado .....	NA	NA	22,148	NA	NA	NA
Connecticut .....	7,173	8,929	12,971	14,438	16,123	15,326
Delaware .....	2,852	3,348	4,766	5,652	5,918	5,563
District of Columbia .....	1,513	2,317	2,158	4,232	4,971	5,042
Florida .....	46,450	45,776	44,267	45,215	34,457	29,299
Georgia .....	19,045	24,082	29,290	30,047	40,351	45,217
Hawaii .....	211	207	215	226	237	239
Idaho .....	3,556	4,298	5,685	6,454	7,128	7,546
Illinois .....	44,672	64,815	89,515	117,123	132,750	171,230
Indiana .....	29,312	39,497	46,637	58,050	64,835	77,926
Iowa .....	11,603	15,115	20,297	25,491	28,952	38,704
Kansas .....	<sup>R</sup> 14,499	16,509	19,765	24,630	28,702	35,391
Kentucky .....	9,592	12,569	15,682	19,924	23,491	31,742
Louisiana .....	115,064	112,568	106,030	101,161	104,504	111,538
Maine .....	323	434	562	702	643	778
Maryland .....	<sup>R</sup> 11,966	<sup>R</sup> 12,410	<sup>R</sup> 17,306	<sup>R</sup> 20,426	<sup>R</sup> 23,169	<sup>R</sup> 25,264
Massachusetts .....	28,215	25,382	38,194	42,536	44,668	NA
Michigan .....	47,778	70,279	87,599	112,016	120,488	135,372
Minnesota .....	14,870	20,092	28,755	38,990	43,574	51,440
Mississippi .....	16,536	13,193	13,006	14,796	17,432	18,819
Missouri .....	11,961	15,127	24,139	28,569	45,769	45,237
Montana .....	2,266	3,230	4,531	5,832	6,646	8,432
Nebraska .....	5,290	NA	<sup>R</sup> 10,771	13,598	19,096	18,609
Nevada .....	10,182	11,097	9,856	12,100	10,278	11,324
New Hampshire .....	1,336	1,843	2,115	2,437	2,626	2,545
New Jersey .....	33,919	39,327	50,240	74,025	65,637	77,588
New Mexico .....	6,162	8,286	7,849	11,458	13,678	16,137
New York .....	NA	NA	NA	NA	NA	NA
North Carolina .....	13,376	15,141	17,647	19,958	25,811	25,277
North Dakota .....	1,384	2,260	3,140	4,558	5,115	5,328
Ohio .....	38,040	59,663	75,369	98,118	113,372	133,180
Oklahoma .....	33,470	30,560	34,124	38,029	43,527	46,819
Oregon .....	7,800	9,529	11,832	14,351	15,519	18,566
Pennsylvania .....	30,381	44,874	60,020	73,750	84,428	92,163
Rhode Island .....	5,714	6,911	7,506	8,622	8,649	8,803
South Carolina .....	10,987	11,697	12,486	13,572	15,741	16,059
South Dakota .....	1,503	2,004	2,900	3,604	4,506	5,684
Tennessee .....	15,758	18,028	21,621	26,945	34,363	33,577
Texas .....	288,929	263,312	251,169	283,943	270,103	317,196
Utah .....	5,977	6,848	11,430	13,219	16,656	18,874
Vermont .....	354	569	782	1,048	1,059	1,078
Virginia .....	11,860	16,686	20,271	21,555	27,861	30,486
Washington .....	13,977	18,288	16,880	23,019	24,824	27,478
West Virginia .....	6,088	8,410	12,384	9,734	13,142	14,271
Wisconsin .....	NA	NA	NA	46,087	48,846	61,081
Wyoming .....	<sup>R</sup> 4,900	<sup>R</sup> 6,272	<sup>R</sup> 6,374	<sup>R</sup> 6,938	<sup>R</sup> 6,883	<sup>R</sup> 8,992
<b>Total .....</b>	<sup>R</sup> 1,283,357	<sup>R</sup> 1,435,250	<sup>R</sup> 1,624,542	<sup>R</sup> 1,916,587	<sup>R</sup> 2,082,937	<sup>R</sup> 2,331,220

See footnotes at end of table.

**Table 18. Natural Gas Deliveries to All Consumers, by State, 1995-1997**  
(Million Cubic Feet) — Continued

State	1996					
	Total	December	November	October	September	August
Alabama .....	293,084	27,094	22,883	21,529	19,832	19,033
Alaska .....	150,877	15,528	13,584	12,633	10,943	11,496
Arizona .....	103,037	10,289	7,516	7,435	6,972	9,510
Arkansas .....	252,585	23,939	18,699	14,990	17,185	18,927
California .....	1,721,217	166,541	147,022	138,842	136,901	155,943
Colorado .....	269,006	33,157	22,968	13,807	11,994	13,252
Connecticut .....	126,488	13,888	10,932	8,990	7,570	7,498
Delaware .....	54,020	4,253	4,459	4,236	4,104	3,910
District of Columbia .....	33,644	4,731	2,448	1,382	1,175	1,130
Florida .....	478,471	29,697	33,713	43,317	48,450	47,884
Georgia .....	374,882	42,005	36,037	24,688	21,145	22,041
Hawaii .....	2,672	220	200	209	213	206
Idaho .....	61,058	6,736	5,424	4,267	3,588	3,040
Illinois .....	1,104,972	149,698	121,461	65,883	42,305	39,723
Indiana .....	561,056	64,588	52,504	35,148	26,545	25,587
Iowa .....	260,140	33,840	27,088	15,392	11,602	11,684
Kansas .....	275,508	33,619	24,789	13,341	13,359	19,111
Kentucky .....	207,529	25,797	22,270	12,879	9,256	8,916
Louisiana .....	1,382,966	108,393	NA	NA	112,202	123,596
Maine .....	5,722	601	619	478	291	274
Maryland .....	189,901	22,026	16,766	10,847	9,705	10,184
Massachusetts .....	355,609	36,513	31,385	28,511	24,573	22,967
Michigan .....	980,555	114,489	91,489	55,831	42,722	39,157
Minnesota .....	348,671	47,484	36,773	21,889	14,156	12,763
Mississippi .....	216,524	16,183	16,579	14,771	18,125	20,243
Missouri .....	286,814	37,323	24,218	12,436	9,811	11,582
Montana .....	55,584	7,466	5,870	3,712	2,549	2,257
Nebraska .....	128,297	16,087	10,994	8,322	5,903	6,101
Nevada .....	122,449	10,973	9,050	8,977	9,476	10,921
New Hampshire .....	19,031	2,155	1,895	1,144	761	742
New Jersey .....	599,810	76,491	50,284	33,981	29,492	26,043
New Mexico .....	113,059	13,633	10,437	7,281	6,165	7,418
New York .....	1,121,742	NA	NA	NA	NA	NA
North Carolina .....	205,783	23,182	17,666	14,099	11,058	10,992
North Dakota .....	32,670	4,544	3,497	1,900	1,219	936
Ohio .....	915,035	111,994	87,340	54,686	34,327	34,726
Oklahoma .....	460,373	42,614	33,004	30,251	33,379	39,824
Oregon .....	160,626	17,626	15,293	14,369	13,598	12,667
Pennsylvania .....	684,022	80,392	65,415	41,287	29,057	29,652
Rhode Island .....	82,041	8,359	7,830	6,999	6,206	6,308
South Carolina .....	146,434	15,449	12,527	10,815	9,849	9,602
South Dakota .....	33,594	4,805	3,425	1,677	1,171	1,162
Tennessee .....	256,053	30,041	23,454	15,496	13,863	13,130
Texas .....	3,585,201	284,720	261,074	NA	292,962	310,564
Utah .....	129,651	16,258	12,727	10,013	7,809	6,534
Vermont .....	7,325	844	698	440	300	273
Virginia .....	230,140	28,550	20,832	12,795	10,655	12,196
Washington .....	231,767	26,206	21,913	17,092	15,904	15,398
West Virginia .....	115,622	13,051	10,306	7,541	6,489	5,743
Wisconsin .....	398,581	50,811	43,208	25,032	16,019	15,491
Wyoming .....	73,609	8,146	7,382	6,411	4,324	4,322
<b>Total .....</b>	<b>20,005,508</b>	<b>2,086,126</b>	<b>1,731,770</b>	<b>1,377,692</b>	<b>1,252,627</b>	<b>1,312,337</b>

See footnotes at end of table.

**Table 18. Natural Gas Deliveries to All Consumers, by State, 1995-1997**

(Million Cubic Feet) — Continued

State	1996					
	July	June	May	April	March	February
Alabama .....	20,226	19,145	21,871	26,181	28,921	33,112
Alaska .....	10,922	10,983	11,154	12,345	14,192	14,334
Arizona .....	8,156	7,142	6,125	7,844	9,402	10,029
Arkansas .....	20,438	19,320	18,556	22,886	23,375	26,509
California .....	135,936	117,883	123,142	128,773	141,423	153,817
Colorado .....	13,596	13,134	17,609	26,605	31,433	37,489
Connecticut .....	6,777	6,410	7,576	11,010	14,113	15,385
Delaware .....	3,861	4,582	3,277	4,143	5,446	5,121
District of Columbia .....	1,290	1,405	2,040	3,637	3,927	5,025
Florida .....	44,211	42,761	48,319	38,647	33,399	31,525
Georgia .....	21,029	21,094	24,193	31,233	41,352	40,564
Hawaii .....	218	221	217	239	236	243
Idaho .....	3,343	3,718	4,537	5,166	6,412	7,355
Illinois .....	39,693	43,213	64,033	89,998	130,862	146,944
Indiana .....	26,098	50,104	22,111	48,080	63,463	68,873
Iowa .....	11,467	12,874	16,431	21,611	29,510	31,850
Kansas .....	19,640	17,217	15,908	20,931	28,138	31,845
Kentucky .....	8,396	11,114	10,325	16,374	24,662	26,052
Louisiana .....	126,054	124,988	117,827	107,234	115,083	109,392
Maine .....	242	297	362	444	676	693
Maryland .....	9,222	9,721	11,805	16,183	22,051	24,090
Massachusetts .....	17,510	19,087	23,463	30,891	37,902	40,483
Michigan .....	40,199	45,332	67,245	92,332	122,400	131,328
Minnesota .....	13,247	14,978	20,593	29,687	41,394	45,020
Mississippi .....	18,928	20,138	17,489	16,692	16,886	19,038
Missouri .....	10,348	11,539	16,261	26,460	35,528	43,572
Montana .....	2,160	2,521	3,602	4,720	5,933	7,397
Nebraska .....	7,356	6,017	7,619	11,193	14,342	16,979
Nevada .....	11,337	9,821	9,861	8,970	10,309	10,619
New Hampshire .....	710	855	1,263	1,793	2,388	2,611
New Jersey .....	31,482	31,189	38,773	53,135	67,758	76,551
New Mexico .....	8,331	8,044	6,718	8,983	9,770	10,949
New York .....	NA	66,556	NA	NA	NA	NA
North Carolina .....	11,307	11,847	13,086	18,978	21,425	24,787
North Dakota .....	885	1,235	2,081	3,180	4,226	4,485
Ohio .....	34,182	47,450	53,255	80,045	112,355	122,483
Oklahoma .....	39,995	36,075	33,715	34,411	40,875	46,027
Oregon .....	11,471	9,484	10,788	10,848	13,315	15,654
Pennsylvania .....	27,532	31,421	41,429	59,787	84,726	91,446
Rhode Island .....	4,620	5,342	6,111	6,827	7,151	6,916
South Carolina .....	9,559	9,690	10,847	13,344	13,721	15,118
South Dakota .....	1,143	1,480	1,896	2,925	4,581	4,604
Tennessee .....	12,981	13,507	14,359	22,229	26,961	33,354
Texas .....	319,000	307,032	318,667	288,584	313,252	290,819
Utah .....	6,500	5,632	6,981	10,571	12,310	17,035
Vermont .....	228	340	498	684	961	1,013
Virginia .....	12,514	10,792	14,116	18,035	28,025	29,635
Washington .....	12,847	12,936	16,490	18,363	22,246	26,822
West Virginia .....	5,830	5,606	7,097	10,302	13,241	14,642
Wisconsin .....	13,931	16,828	24,514	34,055	48,221	51,646
Wyoming .....	4,042	4,952	5,627	6,356	6,574	8,315
<b>Total .....</b>	<b>1,284,757</b>	<b>1,305,052</b>	<b>1,419,753</b>	<b>1,662,615</b>	<b>2,030,051</b>	<b>2,157,511</b>

<sup>R</sup> = Revised Data.

NA = Not Available.

Notes: Geographic coverage is the 50 States and the District of Columbia. Gas volumes delivered for use as vehicle fuel are included in the annual total for commercial deliveries but not in the monthly components. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy.

Source: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers" and Form EIA-759, "Monthly Power Plant Report."

**Table 19. Average City Gate Price, by State, 1995-1997**

(Dollars per Thousand Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997				
				September	August	July	June	May
Alabama .....	3.85	3.38	2.87	3.83	3.88	4.10	3.86	3.54
Alaska .....	1.24	1.58	1.68	1.79	1.73	1.74	1.70	1.78
Arizona .....	3.19	2.39	2.13	3.74	3.16	2.98	3.32	3.18
Arkansas .....	3.17	2.55	2.30	2.87	3.28	2.78	2.77	2.59
California .....	2.96	2.37	2.02	2.74	2.79	3.72	2.67	2.55
Colorado .....	3.18	2.29	2.72	NA	NA	NA	NA	NA
Connecticut .....	5.29	5.07	4.84	5.29	5.33	4.55	4.76	4.81
Delaware .....	3.59	3.58	2.62	1.04	4.07	3.51	3.44	3.20
District of Columbia .....	—	—	—	—	—	—	—	—
Florida .....	3.88	3.62	2.59	3.82	3.31	3.41	3.50	3.09
Georgia .....	4.07	3.66	2.99	5.29	3.90	3.96	4.37	3.20
Hawaii .....	6.51	5.91	5.16	6.11	6.35	6.59	5.46	6.47
Idaho .....	2.25	2.26	2.29	NA	2.50	2.16	2.83	2.98
Illinois .....	3.20	3.17	2.64	3.78	3.37	2.81	3.11	3.06
Indiana .....	2.98	2.99	2.87	3.15	2.87	2.54	2.35	2.32
Iowa .....	3.78	3.37	2.87	5.39	5.86	6.62	4.74	3.49
Kansas .....	3.33	2.88	2.29	3.47	3.11	2.88	3.02	2.85
Kentucky .....	3.69	3.23	2.87	3.57	3.62	3.68	3.69	3.30
Louisiana .....	2.95	3.03	2.09	3.01	<sup>R</sup> 2.56	2.58	2.63	2.40
Maine .....	4.23	4.42	3.54	3.79	4.43	4.34	4.53	4.69
Maryland .....	4.07	NA	2.90	5.77	<sup>R</sup> 6.05	<sup>R</sup> 5.81	<sup>R</sup> 4.34	<sup>R</sup> 4.15
Massachusetts .....	3.81	3.93	3.57	4.58	4.29	5.29	5.61	2.86
Michigan .....	2.90	2.84	2.59	2.87	2.63	2.54	2.69	2.60
Minnesota .....	3.42	2.91	2.51	4.02	2.97	3.92	3.49	2.64
Mississippi .....	3.37	3.15	2.35	NA	NA	NA	2.95	2.43
Missouri .....	3.78	3.05	2.77	5.08	4.79	4.61	5.31	3.95
Montana .....	3.30	2.92	3.18	3.76	3.96	3.63	3.91	2.28
Nebraska .....	3.79	2.88	2.51	7.03	5.51	4.96	4.09	3.11
Nevada .....	3.50	2.82	2.86	4.12	3.99	3.87	3.64	2.72
New Hampshire .....	4.20	4.16	3.39	NA	4.45	4.28	4.34	3.66
New Jersey .....	4.14	3.75	3.28	4.22	4.41	4.29	4.21	3.86
New Mexico .....	2.52	1.51	1.45	2.62	2.18	2.13	2.13	2.04
New York .....	3.41	3.32	2.36	3.42	NA	NA	NA	NA
North Carolina .....	4.00	3.71	2.98	4.13	3.96	3.90	3.84	3.83
North Dakota .....	3.31	2.75	2.66	3.53	3.36	3.14	3.17	2.95
Ohio .....	5.43	4.16	4.02	4.91	5.51	7.16	6.17	5.96
Oklahoma .....	3.09	2.55	2.61	2.58	2.66	3.23	2.66	2.22
Oregon .....	2.61	2.33	2.59	3.12	4.01	3.45	3.00	3.02
Pennsylvania .....	4.04	3.66	3.20	4.56	4.36	4.03	4.90	4.30
Rhode Island .....	4.58	4.38	3.61	5.71	6.64	7.53	6.42	4.81
South Carolina .....	3.74	3.86	3.29	4.03	3.86	3.74	3.78	3.54
South Dakota .....	3.71	NA	2.99	4.03	4.26	4.40	4.58	3.75
Tennessee .....	3.08	3.87	2.65	2.78	2.51	2.71	NA	2.96
Texas .....	3.58	3.05	2.93	3.21	3.11	3.23	3.01	2.50
Utah .....	2.58	2.16	3.18	2.81	3.02	2.83	2.35	1.93
Vermont .....	2.19	2.88	2.71	2.29	2.33	2.41	2.58	2.77
Virginia .....	4.18	3.74	2.91	4.69	4.47	3.94	3.77	5.12
Washington .....	2.65	2.33	2.23	NA	NA	NA	2.28	2.53
West Virginia .....	3.15	3.34	2.85	3.53	3.89	1.85	3.90	3.02
Wisconsin .....	3.65	3.28	2.90	4.52	4.75	<sup>R</sup> 3.68	NA	3.39
Wyoming .....	3.05	NA	NA	2.95	<sup>R</sup> 2.90	<sup>R</sup> 2.94	<sup>R</sup> 2.85	<sup>R</sup> 1.64
<b>Total</b> .....	3.56	3.21	2.79	3.61	<sup>R</sup> 3.44	<sup>R</sup> 3.61	<sup>R</sup> 3.44	3.16

See footnotes at end of table.

**Table 19. Average City Gate Price, by State, 1995-1997**

(Dollars per Thousand Cubic Feet) — Continued

State	1997				1996			
	April	March	February	January	Total	December	November	October
Alabama .....	3.16	3.20	4.02	4.44	3.48	4.07	3.61	3.44
Alaska .....	0.38	1.84	1.80	1.88	1.58	1.59	1.60	1.55
Arizona .....	2.61	2.22	2.85	4.21	2.78	4.14	3.32	2.66
Arkansas .....	2.48	2.46	3.16	4.18	2.76	3.68	3.04	2.46
California .....	2.30	2.25	3.21	4.14	2.59	3.81	3.00	2.37
Colorado .....	2.30	NA	NA	NA	2.70	4.91	3.13	2.58
Connecticut .....	4.94	4.82	6.00	5.82	5.11	6.15	4.60	4.46
Delaware .....	3.00	4.16	5.09	6.92	3.68	4.96	3.66	2.94
District of Columbia .....	—	—	—	—	—	—	—	—
Florida .....	3.62	4.04	4.56	4.61	3.73	4.80	3.90	3.28
Georgia .....	3.08	3.31	4.15	4.80	3.77	4.65	3.71	3.17
Hawaii .....	7.21	6.50	7.73	6.16	6.05	6.67	6.30	6.33
Idaho .....	2.08	1.85	2.13	2.37	2.24	2.30	2.10	2.11
Illinois .....	2.48	2.43	3.30	3.79	3.27	4.05	3.25	2.65
Indiana .....	2.07	2.31	3.20	4.08	3.09	3.83	3.16	2.49
Iowa .....	2.83	3.05	3.66	3.98	3.47	4.09	3.46	3.12
Kansas .....	2.38	2.67	3.67	4.37	3.05	3.77	3.38	2.91
Kentucky .....	3.62	3.40	3.47	4.17	3.41	4.40	3.59	2.94
Louisiana .....	2.36	2.44	3.49	3.84	3.13	4.30	3.24	2.31
Maine .....	3.43	4.26	3.52	4.96	4.30	4.34	3.64	3.93
Maryland .....	<sup>R</sup> 3.15	<sup>R</sup> 3.32	<sup>R</sup> 3.75	<sup>R</sup> 4.14	4.02	4.65	3.75	3.65
Massachusetts .....	3.26	2.97	4.12	4.30	3.98	4.82	3.72	3.60
Michigan .....	2.56	2.66	3.28	3.98	2.90	3.73	3.07	2.49
Minnesota .....	2.41	2.70	3.48	4.51	3.07	3.78	3.19	2.65
Mississippi .....	2.89	2.82	3.48	4.25	3.27	4.34	3.14	2.67
Missouri .....	3.11	2.78	3.50	4.05	3.25	4.03	3.20	3.47
Montana .....	3.09	2.70	3.50	3.73	3.03	3.46	3.04	3.08
Nebraska .....	2.28	3.02	3.75	4.42	3.07	3.99	3.11	2.93
Nevada .....	2.81	2.96	3.37	4.13	3.10	3.97	3.46	2.96
New Hampshire .....	3.15	3.99	4.42	4.93	4.20	5.01	4.15	3.19
New Jersey .....	3.15	3.99	4.20	4.70	3.84	4.82	3.83	3.25
New Mexico .....	1.91	1.38	2.39	3.85	1.99	3.60	2.68	1.88
New York .....	NA	NA	NA	NA	3.36	4.38	3.03	2.86
North Carolina .....	3.40	3.51	4.34	4.36	3.74	4.26	3.48	3.22
North Dakota .....	2.50	2.43	3.59	4.22	2.94	3.80	3.10	2.49
Ohio .....	5.79	5.01	5.41	5.24	4.37	4.79	4.95	5.06
Oklahoma .....	2.22	3.09	3.68	3.52	2.56	2.84	2.44	1.99
Oregon .....	1.95	1.92	2.35	2.95	2.42	2.95	2.41	2.24
Pennsylvania .....	3.48	3.48	4.12	4.22	3.77	4.24	3.92	3.85
Rhode Island .....	3.46	3.16	4.26	4.85	4.41	5.20	4.04	3.91
South Carolina .....	3.25	2.95	3.97	4.20	3.90	4.60	3.76	3.26
South Dakota .....	3.02	2.78	3.95	4.10	3.19	3.98	3.37	2.87
Tennessee .....	2.51	NA	3.73	4.10	4.04	6.64	3.71	2.92
Texas .....	2.38	3.01	4.16	4.70	3.22	4.21	3.49	2.73
Utah .....	2.15	2.69	2.76	2.65	2.25	2.39	3.32	1.66
Vermont .....	2.39	2.26	2.16	1.57	2.74	2.67	2.49	2.18
Virginia .....	3.28	3.49	3.96	5.04	3.89	5.13	3.69	3.34
Washington .....	2.70	1.89	2.62	3.45	2.44	3.14	2.50	1.94
West Virginia .....	2.88	2.17	3.54	3.61	3.36	3.53	3.25	3.57
Wisconsin .....	NA	2.89	3.54	4.13	3.43	4.12	3.61	3.17
Wyoming .....	<sup>R</sup> 2.48	3.19	3.61	<sup>R</sup> 4.22	2.36	2.55	2.18	1.91
<b>Total</b> .....	2.90	3.06	3.78	4.27	3.34	4.18	3.46	2.94

See footnotes at end of table.



**Table 19. Average City Gate Price, by State, 1995-1997**

(Dollars per Thousand Cubic Feet) — Continued

State	1996							
	September	August	July	June	May	April	March	February
Alabama .....	3.62	4.11	4.04	3.86	3.57	3.27	3.15	3.35
Alaska .....	1.57	1.54	1.54	1.57	1.56	1.58	1.60	1.60
Arizona .....	3.02	3.58	2.94	2.57	2.46	2.05	1.97	2.36
Arkansas .....	2.29	2.59	2.76	2.82	2.59	2.50	2.57	2.52
California .....	2.34	2.77	2.42	2.56	2.14	2.22	2.42	2.25
Colorado .....	2.49	2.29	2.30	2.40	2.50	2.94	2.16	2.18
Connecticut .....	4.65	4.42	4.75	5.03	4.94	5.22	4.66	5.37
Delaware .....	3.03	3.80	4.22	3.44	3.18	3.75	4.20	3.43
District of Columbia .....	—	—	—	—	—	—	—	—
Florida .....	3.03	3.54	3.57	3.31	3.39	3.97	3.83	3.60
Georgia .....	3.31	4.00	4.22	3.68	3.74	3.51	3.82	3.36
Hawaii .....	6.00	6.05	6.34	6.27	6.32	5.74	5.53	5.49
Idaho .....	2.72	2.48	5.26	3.39	2.28	2.21	2.12	2.08
Illinois .....	2.80	3.25	3.69	3.12	2.83	2.93	3.49	3.73
Indiana .....	2.04	2.70	3.30	3.10	2.56	2.90	3.06	3.32
Iowa .....	4.28	7.96	7.45	4.61	4.19	3.13	2.82	3.03
Kansas .....	2.63	2.88	3.24	3.53	3.24	3.24	2.70	2.66
Kentucky .....	3.16	3.04	3.07	3.08	3.83	3.50	3.29	3.05
Louisiana .....	2.26	2.69	3.01	2.72	2.65	3.06	3.29	3.24
Maine .....	3.91	4.35	5.04	5.51	5.61	5.34	4.01	3.89
Maryland .....	5.61	5.85	6.04	5.63	4.35	4.01	3.70	3.23
Massachusetts .....	5.36	5.68	5.53	6.05	4.37	3.97	3.32	3.17
Michigan .....	2.31	2.98	2.87	2.64	2.69	2.80	3.11	2.91
Minnesota .....	2.91	3.32	4.14	2.88	2.82	2.73	2.79	2.78
Mississippi .....	2.59	2.89	3.10	2.90	2.70	3.37	3.36	3.07
Missouri .....	4.14	5.13	4.82	4.51	3.86	3.20	2.61	2.59
Montana .....	3.24	4.13	3.60	3.05	2.81	3.18	2.52	2.98
Nebraska .....	2.85	4.83	3.30	3.50	3.41	3.04	2.71	2.45
Nevada .....	3.26	3.83	3.48	3.36	3.17	2.90	2.45	2.61
New Hampshire .....	3.86	4.47	5.03	4.64	4.17	4.09	4.06	3.99
New Jersey .....	3.69	3.71	3.93	3.88	4.55	3.78	3.23	3.47
New Mexico .....	1.66	2.07	1.60	1.40	1.22	1.18	1.40	1.69
New York .....	2.61	2.91	3.13	3.17	3.18	3.40	3.50	3.38
North Carolina .....	3.68	3.94	3.75	3.75	3.69	3.95	3.60	3.66
North Dakota .....	2.54	3.44	2.90	2.78	2.64	2.62	2.45	2.82
Ohio .....	6.12	5.58	4.53	8.17	4.87	4.06	3.90	3.80
Oklahoma .....	2.53	2.65	2.51	2.40	2.61	2.53	2.58	2.60
Oregon .....	2.98	3.15	3.89	2.11	2.40	2.27	2.19	1.96
Pennsylvania .....	4.39	4.86	5.13	4.62	3.90	4.25	3.32	3.16
Rhode Island .....	5.94	6.51	7.46	6.42	5.06	3.53	3.85	3.92
South Carolina .....	3.53	3.87	4.01	3.49	3.96	3.96	3.94	3.77
South Dakota .....	3.40	6.37	4.74	3.96	2.92	2.63	2.84	2.79
Tennessee .....	3.40	3.70	3.48	3.67	3.72	3.28	3.29	4.56
Texas .....	2.87	2.97	3.04	2.91	2.81	3.13	3.05	3.13
Utah .....	2.22	2.08	2.15	2.12	1.93	1.98	2.34	2.10
Vermont .....	2.36	2.69	3.68	3.01	2.66	3.10	2.83	2.82
Virginia .....	3.40	4.42	4.52	4.93	4.00	3.38	3.58	3.36
Washington .....	2.71	3.21	3.57	3.39	2.30	2.23	1.99	2.12
West Virginia .....	3.74	4.43	3.85	3.49	3.54	3.21	3.36	3.54
Wisconsin .....	4.11	4.98	4.80	5.09	3.43	3.48	2.88	2.78
Wyoming .....	2.84	2.92	2.44	2.40	2.12	2.32	3.07	2.45
<b>Total .....</b>	<b>3.05</b>	<b>3.46</b>	<b>3.49</b>	<b>3.41</b>	<b>3.18</b>	<b>3.22</b>	<b>3.17</b>	<b>3.16</b>

<sup>R</sup> = Revised Data.

NA = Not Available.

— = Not Applicable.

Notes: Geographic coverage is the 50 States and the District of Columbia. Prices in this table represent the average price of natural gas by State at the point where the gas transferred from a pipeline to a local distribution company within the State. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy.

Source: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

**Table 20. Average Price of Natural Gas Delivered to Residential Consumers, by State, 1995-1997**

(Dollars per Thousand Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997				
				September	August	July	June	May
Alabama .....	8.56	7.06	6.99	11.62	11.70	11.26	10.45	8.69
Alaska .....	3.83	3.44	3.65	3.94	4.66	4.43	4.27	3.88
Arizona .....	7.57	7.57	7.84	9.10	10.54	10.05	9.59	8.68
Arkansas .....	6.67	5.73	5.64	9.53	9.25	8.64	8.23	6.93
California .....	6.59	6.47	6.55	7.42	7.57	7.05	7.71	6.38
Colorado .....	3.88	4.45	4.88	NA	NA	NA	NA	NA
Connecticut .....	10.49	9.96	10.06	11.58	11.48	11.35	10.71	10.71
Delaware .....	8.35	6.90	6.61	11.91	11.94	11.69	10.13	8.93
District of Columbia .....	9.19	8.95	8.17	11.34	8.40	8.46	8.28	9.18
Florida .....	12.46	10.54	9.75	14.96	15.05	14.65	14.15	13.36
Georgia .....	8.12	6.70	6.77	10.57	11.75	11.87	12.38	10.42
Hawaii .....	22.02	19.65	17.34	21.33	21.61	21.17	21.51	21.78
Idaho .....	5.09	5.23	5.65	NA	6.51	6.16	5.81	5.26
Illinois .....	6.11	5.29	4.88	8.00	7.87	7.83	7.93	5.43
Indiana .....	6.59	NA	5.67	8.77	9.40	10.18	8.85	7.23
Iowa .....	6.16	5.41	5.23	11.19	10.25	9.53	8.08	6.21
Kansas .....	6.51	5.52	4.78	8.54	8.27	7.54	<sup>R</sup> 8.03	6.24
Kentucky .....	6.46	5.32	5.32	7.94	9.22	9.15	7.56	6.67
Louisiana .....	7.22	6.53	5.85	9.42	8.76	8.41	8.45	7.52
Maine .....	8.59	7.77	7.42	9.46	9.25	9.69	8.39	7.95
Maryland .....	8.15	NA	6.68	10.72	<sup>R</sup> 11.35	<sup>R</sup> 10.88	<sup>R</sup> 9.62	<sup>R</sup> 8.26
Massachusetts .....	9.46	8.78	9.06	10.09	10.39	9.86	8.32	7.49
Michigan .....	5.16	4.89	4.75	6.81	7.26	6.88	6.15	5.10
Minnesota .....	5.79	5.30	4.76	7.62	7.17	7.06	6.36	5.32
Mississippi .....	6.23	NA	5.25	NA	NA	NA	7.36	6.91
Missouri .....	6.50	5.89	5.07	9.59	9.38	8.77	7.53	5.88
Montana .....	4.90	4.85	5.22	6.73	6.98	7.46	6.10	5.00
Nebraska .....	5.70	4.72	4.79	7.90	<sup>R</sup> 7.72	<sup>R</sup> 7.43	6.32	4.65
Nevada .....	6.18	6.24	6.79	7.95	7.99	7.58	7.31	6.63
New Hampshire .....	8.50	7.08	7.08	NA	9.17	9.01	7.59	6.62
New Jersey .....	7.92	7.14	7.28	9.80	9.82	9.62	9.38	8.30
New Mexico .....	6.61	4.68	5.54	10.84	11.07	11.66	40.76	6.53
New York .....	9.61	NA	8.40	NA	NA	NA	NA	NA
North Carolina .....	9.25	7.38	7.07	13.11	13.15	12.42	10.31	8.58
North Dakota .....	4.65	4.68	4.68	7.54	7.02	7.05	6.37	5.10
Ohio .....	6.87	5.63	5.61	8.29	8.46	8.71	7.55	6.74
Oklahoma .....	6.43	5.57	5.55	9.28	9.36	8.95	8.14	6.80
Oregon .....	6.11	6.35	6.78	7.88	8.12	7.53	7.21	6.38
Pennsylvania .....	8.44	7.20	7.61	11.12	11.50	11.78	10.15	8.88
Rhode Island .....	9.67	NA	7.90	12.10	12.53	12.30	10.90	9.70
South Carolina .....	8.81	7.29	7.79	10.15	10.24	9.73	8.96	8.09
South Dakota .....	5.58	NA	5.09	9.10	8.07	8.39	7.83	5.92
Tennessee .....	6.99	6.28	5.88	8.81	9.00	8.92	NA	6.49
Texas .....	6.48	5.82	6.01	8.67	8.91	8.38	7.83	6.42
Utah .....	5.02	4.43	4.79	5.55	5.94	5.61	5.67	5.80
Vermont .....	6.40	6.38	6.92	8.41	8.78	8.51	7.35	6.52
Virginia .....	8.77	7.69	7.53	12.27	12.45	12.40	10.70	9.05
Washington .....	5.57	5.68	5.96	NA	NA	NA	5.82	5.69
West Virginia .....	7.07	7.03	7.11	8.89	9.58	10.39	8.47	7.26
Wisconsin .....	6.52	5.90	5.87	6.86	NA	6.76	NA	NA
Wyoming .....	4.11	NA	NA	6.09	<sup>R</sup> 6.31	<sup>R</sup> 5.83	<sup>R</sup> 5.25	3.23
<b>Total .....</b>	<b>6.93</b>	<b>6.27</b>	<b>6.21</b>	<b>8.55</b>	<b><sup>R</sup>8.70</b>	<b><sup>R</sup>8.46</b>	<b><sup>R</sup>8.12</b>	<b><sup>R</sup>6.80</b>

See footnotes at end of table.

**Table 20. Average Price of Natural Gas Delivered to Residential Consumers, by State, 1995-1997**

(Dollars per Thousand Cubic Feet) — Continued

State	1997				1996			
	April	March	February	January	Total	December	November	October
Alabama .....	9.21	8.65	7.61	7.62	7.22	7.36	7.83	9.71
Alaska .....	3.75	3.79	3.66	3.63	3.42	3.32	3.37	3.46
Arizona .....	7.93	7.03	6.81	6.62	7.52	6.85	7.43	9.28
Arkansas .....	6.40	6.14	6.09	6.48	5.92	6.64	6.05	7.06
California .....	6.18	6.42	6.27	6.27	6.44	6.20	6.41	6.67
Colorado .....	3.92	NA	NA	NA	4.39	3.94	4.31	4.99
Connecticut .....	10.07	9.66	10.96	10.41	10.08	10.49	10.26	10.58
Delaware .....	8.25	7.94	7.75	7.54	7.12	7.59	7.90	9.08
District of Columbia .....	8.74	8.57	9.36	9.81	9.19	10.22	9.18	10.25
Florida .....	12.89	12.12	10.69	10.57	10.74	10.47	11.98	13.01
Georgia .....	6.23	8.88	7.47	6.53	6.69	6.75	5.83	8.51
Hawaii .....	21.30	22.29	25.55	21.14	19.81	19.51	20.71	20.95
Idaho .....	5.10	4.95	4.80	4.81	5.20	4.89	5.22	5.60
Illinois .....	5.10	5.28	6.50	6.15	5.28	5.13	5.05	5.93
Indiana .....	6.70	6.28	6.06	5.82	5.54	5.65	5.52	6.55
Iowa .....	5.24	5.58	6.01	5.57	5.49	5.71	5.30	6.66
Kansas .....	6.04	5.98	6.58	6.33	5.59	5.75	5.47	6.48
Kentucky .....	6.84	6.32	6.02	5.87	5.54	6.10	5.73	6.62
Louisiana .....	6.09	6.28	6.85	7.34	6.76	7.30	7.75	8.31
Maine .....	9.05	8.65	8.66	8.10	7.84	8.53	8.05	7.04
Maryland .....	<sup>R</sup> 8.14	<sup>R</sup> 7.31	<sup>R</sup> 7.64	<sup>R</sup> 7.68	7.60	7.81	7.30	8.45
Massachusetts .....	9.90	9.70	9.62	NA	8.88	9.53	9.52	7.54
Michigan .....	4.92	4.82	4.94	5.04	4.96	5.07	5.01	5.58
Minnesota .....	4.66	4.81	5.81	6.50	5.46	6.18	5.47	5.48
Mississippi .....	6.42	5.49	5.61	6.17	5.72	6.58	6.28	6.35
Missouri .....	5.31	5.70	6.50	6.67	5.97	6.02	5.94	7.58
Montana .....	4.73	4.69	4.49	4.47	4.86	4.59	4.89	5.53
Nebraska .....	4.91	4.86	5.75	6.21	4.88	5.35	5.01	5.59
Nevada .....	6.16	5.78	5.76	5.54	6.19	5.69	6.05	7.40
New Hampshire .....	6.62	9.36	9.24	9.10	7.40	8.41	8.67	7.05
New Jersey .....	7.71	7.42	7.47	7.67	7.16	7.02	7.29	7.66
New Mexico .....	8.78	4.46	5.09	5.81	4.47	3.72	3.80	5.80
New York .....	NA	NA	NA	NA	8.90	NA	NA	NA
North Carolina .....	8.68	9.59	8.76	8.77	7.59	7.90	8.21	9.93
North Dakota .....	4.10	4.14	4.32	4.43	4.54	4.34	3.84	4.66
Ohio .....	6.60	6.51	6.83	6.72	5.90	6.29	6.56	7.29
Oklahoma .....	5.96	5.66	5.79	6.44	5.64	5.32	5.99	8.12
Oregon .....	6.04	5.85	5.76	5.73	6.31	5.95	6.30	7.01
Pennsylvania .....	8.41	8.05	8.05	7.64	7.38	7.60	7.80	8.60
Rhode Island .....	9.67	9.39	9.18	8.79	8.49	8.68	9.36	9.90
South Carolina .....	8.36	9.24	8.69	8.67	7.41	7.85	7.50	8.21
South Dakota .....	4.95	4.83	5.09	5.50	5.25	5.39	5.41	5.94
Tennessee .....	6.39	NA	7.00	6.84	6.26	6.17	5.93	7.07
Texas .....	5.66	5.56	6.05	6.35	5.89	6.14	5.34	7.07
Utah .....	4.16	5.14	4.89	4.91	4.47	4.75	4.81	3.79
Vermont .....	6.23	6.08	6.04	6.04	6.40	6.19	6.42	7.21
Virginia .....	8.12	7.56	8.07	8.87	7.94	8.48	8.26	9.78
Washington .....	5.68	5.48	5.40	5.39	5.65	5.44	5.60	6.09
West Virginia .....	6.91	6.80	6.67	6.68	7.02	6.80	7.01	7.55
Wisconsin .....	NA	5.96	6.66	7.08	6.04	6.87	6.25	5.02
Wyoming .....	4.73	<sup>R</sup> 4.01	<sup>R</sup> 3.91	<sup>R</sup> 3.51	4.26	3.97	3.75	3.95
<b>Total</b> .....	<sup>R</sup> 6.53	6.49	<sup>R</sup> 6.75	<sup>R</sup> 6.71	6.34	6.47	6.37	7.05

See footnotes at end of table.

**Table 20. Average Price of Natural Gas Delivered to Residential Consumers, by State, 1995-1997**

(Dollars per Thousand Cubic Feet) — Continued

State	1996							
	September	August	July	June	May	April	March	February
Alabama .....	10.63	10.98	10.77	10.56	8.10	6.89	6.84	6.35
Alaska .....	3.77	3.82	3.87	3.71	3.53	3.40	3.34	3.30
Arizona .....	10.06	10.40	10.02	9.35	8.70	7.59	6.99	6.82
Arkansas .....	7.75	8.30	8.44	7.88	6.75	5.46	5.42	5.27
California .....	5.94	6.85	8.28	6.99	6.39	6.01	6.21	6.33
Colorado .....	6.38	6.74	6.23	5.18	4.49	4.27	4.16	4.08
Connecticut .....	10.65	10.69	10.34	9.94	9.62	10.06	9.80	9.85
Delaware .....	10.58	10.19	10.27	8.92	7.83	6.75	6.42	6.29
District of Columbia .....	10.78	7.82	8.11	9.37	10.22	10.58	9.31	8.75
Florida .....	13.39	13.65	12.96	12.84	11.82	10.31	9.94	9.35
Georgia .....	10.32	10.50	10.98	11.40	10.48	7.33	5.56	5.99
Hawaii .....	20.47	20.50	20.81	20.12	20.44	19.20	19.12	18.73
Idaho .....	6.11	6.47	6.35	5.71	5.39	5.29	5.07	4.99
Illinois .....	8.14	9.26	8.43	8.21	6.76	5.51	4.91	4.55
Indiana .....	8.37	8.68	8.47	7.81	6.50	5.71	5.05	4.84
Iowa .....	9.16	12.66	8.87	7.86	6.18	5.08	4.76	4.80
Kansas .....	7.09	8.27	7.06	7.60	6.74	5.64	5.26	5.11
Kentucky .....	7.85	8.39	8.10	7.50	7.21	5.11	5.09	4.69
Louisiana .....	8.41	8.66	9.30	8.53	8.19	7.01	5.64	5.44
Maine .....	8.23	8.90	8.57	8.06	7.62	8.27	7.88	7.78
Maryland .....	10.11	10.95	10.87	9.91	8.57	7.35	7.15	6.99
Massachusetts .....	9.30	9.56	9.10	7.89	6.06	9.48	9.08	9.05
Michigan .....	6.55	7.32	7.18	6.55	5.20	4.79	4.44	4.60
Minnesota .....	6.67	7.67	7.50	6.71	5.77	5.38	4.97	4.88
Mississippi .....	6.35	6.40	6.47	6.36	6.16	5.64	5.54	4.91
Missouri .....	9.53	10.20	9.53	8.45	6.87	5.71	5.47	5.31
Montana .....	6.18	6.64	6.30	5.29	4.91	4.68	4.62	4.56
Nebraska .....	6.74	7.02	6.76	5.95	5.22	4.68	4.46	4.29
Nevada .....	7.91	8.13	7.66	7.04	6.68	6.22	5.86	5.76
New Hampshire .....	8.26	8.58	8.45	7.29	6.18	5.94	7.37	7.25
New Jersey .....	8.73	8.72	8.96	8.73	7.15	7.34	6.84	6.77
New Mexico .....	8.53	7.36	4.61	4.37	11.89	4.79	4.72	4.33
New York .....	NA	NA	11.08	10.03	8.80	8.39	8.12	8.22
North Carolina .....	12.45	12.81	11.13	11.48	9.07	7.31	7.54	6.83
North Dakota .....	6.20	7.43	7.25	6.58	5.04	4.59	4.07	4.44
Ohio .....	8.41	8.98	8.10	7.07	6.34	5.39	5.35	5.40
Oklahoma .....	9.14	9.58	9.30	8.54	6.96	5.28	5.16	4.82
Oregon .....	7.85	8.28	7.81	6.99	6.56	6.40	6.23	5.72
Pennsylvania .....	10.61	10.70	10.46	9.10	8.16	7.30	6.68	6.62
Rhode Island .....	11.21	11.29	11.05	9.82	8.39	8.48	8.06	7.88
South Carolina .....	9.27	9.72	9.58	8.85	7.90	6.78	7.47	7.20
South Dakota .....	7.62	11.79	8.33	6.65	5.65	5.21	4.36	4.67
Tennessee .....	8.46	8.77	8.44	8.30	7.25	6.62	6.43	5.97
Texas .....	7.86	8.37	8.00	7.33	6.98	6.13	5.44	5.17
Utah .....	4.15	5.19	4.99	5.40	4.59	3.90	4.94	3.97
Vermont .....	8.41	8.92	8.73	7.49	6.59	6.24	6.09	6.02
Virginia .....	11.94	12.50	12.40	10.73	8.78	7.53	6.88	7.23
Washington .....	6.87	7.32	6.72	6.12	5.74	5.64	5.46	5.39
West Virginia .....	9.22	10.24	9.73	9.17	7.52	6.91	6.71	6.66
Wisconsin .....	6.01	6.73	6.71	6.03	5.58	5.92	5.89	5.77
Wyoming .....	5.29	5.68	5.71	5.02	4.58	4.42	4.29	4.04
<b>Total .....</b>	<b>7.99</b>	<b>8.73</b>	<b>8.64</b>	<b>7.83</b>	<b>6.84</b>	<b>6.27</b>	<b>5.93</b>	<b>5.82</b>

<sup>R</sup> = Revised Data.

NA = Not Available.

Notes: Data for 1996 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy.

Source: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

**Table 21. Average Price of Natural Gas Sold to Commercial Consumers, by State, 1995-1997**  
(Dollars per Thousand Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997				
				September	August	July	June	May
Alabama .....	7.12	6.11	5.88	7.59	7.50	7.60	7.22	6.85
Alaska .....	2.40	2.32	2.27	2.28	2.02	2.24	2.15	2.23
Arizona .....	5.21	5.02	5.33	5.82	5.34	5.22	5.21	5.19
Arkansas .....	5.17	4.50	4.10	5.54	5.18	5.32	5.37	5.14
California .....	6.31	5.98	6.28	5.88	5.00	5.90	6.32	5.33
Colorado .....	3.24	3.76	4.34	NA	NA	NA	NA	NA
Connecticut .....	7.43	7.38	7.48	6.59	5.22	5.90	6.35	7.00
Delaware .....	6.74	5.71	5.30	7.28	8.64	7.91	7.39	6.82
District of Columbia .....	7.96	7.19	6.03	8.11	7.20	6.92	7.03	6.87
Florida .....	6.82	6.46	5.28	6.94	6.62	6.98	6.93	6.89
Georgia .....	6.70	5.83	5.48	6.28	7.00	7.60	7.68	6.30
Hawaii .....	15.14	14.13	12.91	14.62	15.09	15.07	15.37	15.25
Idaho .....	4.46	4.58	4.85	NA	4.83	4.76	4.78	4.66
Illinois .....	5.49	4.85	4.59	6.24	6.10	5.68	5.55	4.93
Indiana .....	5.57	NA	4.62	6.05	6.07	6.50	6.28	6.15
Iowa .....	5.13	4.35	4.18	7.44	6.44	5.68	6.05	4.88
Kansas .....	5.75	4.55	3.90	5.66	5.21	5.11	5.45	5.25
Kentucky .....	5.76	4.84	4.74	5.90	5.95	6.20	6.00	5.53
Louisiana .....	6.21	5.95	4.98	6.77	5.94	5.39	6.19	6.08
Maine .....	7.77	6.97	6.56	7.61	7.16	7.12	6.94	6.67
Maryland .....	6.36	6.06	5.03	6.89	6.22	6.16	<sup>R</sup> 6.52	<sup>R</sup> 6.05
Massachusetts .....	7.26	6.64	6.59	5.45	5.53	5.34	5.04	5.44
Michigan .....	4.91	4.66	4.46	5.97	5.96	5.81	5.44	4.82
Minnesota .....	4.85	4.46	3.93	4.99	4.41	4.44	4.50	3.99
Mississippi .....	5.05	5.24	4.29	NA	NA	NA	4.79	5.08
Missouri .....	5.73	5.26	4.27	5.70	5.19	5.11	4.86	4.39
Montana .....	4.64	4.64	4.98	4.39	5.73	5.62	5.39	4.81
Nebraska .....	4.05	NA	NA	4.33	<sup>R</sup> 4.40	<sup>R</sup> 4.37	4.35	NA
Nevada .....	5.03	4.90	5.46	5.22	5.22	5.11	5.07	5.12
New Hampshire .....	7.71	6.49	6.42	NA	6.47	6.49	6.20	5.86
New Jersey .....	6.16	6.25	5.59	4.27	4.43	4.32	4.38	5.77
New Mexico .....	4.73	3.36	4.00	5.12	5.35	5.47	7.67	4.23
New York .....	6.65	NA	6.21	NA	NA	NA	NA	NA
North Carolina .....	7.09	6.02	5.27	6.46	6.44	6.44	5.99	6.02
North Dakota .....	4.09	4.07	3.93	5.15	4.51	4.96	4.54	4.25
Ohio .....	6.43	5.13	5.01	6.54	6.82	6.76	7.39	6.08
Oklahoma .....	5.54	4.62	4.51	5.02	4.94	4.93	5.15	4.97
Oregon .....	4.62	4.87	5.25	4.82	4.89	4.76	4.79	4.62
Pennsylvania .....	7.53	6.32	6.53	7.68	7.92	8.12	8.13	7.99
Rhode Island .....	8.27	7.38	6.39	8.77	9.12	8.96	8.77	8.07
South Carolina .....	6.40	6.17	6.22	3.26	6.03	5.90	5.92	5.92
South Dakota .....	4.53	NA	4.05	6.51	5.22	5.44	6.09	4.77
Tennessee .....	5.98	5.77	5.26	6.07	5.81	5.91	NA	5.39
Texas .....	4.95	4.09	4.06	4.84	4.40	4.51	4.80	4.60
Utah .....	3.69	3.28	3.59	3.99	4.02	3.82	3.60	3.37
Vermont .....	5.23	5.28	5.52	5.01	5.43	5.42	5.41	5.58
Virginia .....	6.48	5.77	5.19	6.60	6.58	6.68	6.10	6.31
Washington .....	4.72	4.82	5.04	NA	NA	NA	4.66	4.83
West Virginia .....	6.45	6.06	6.10	7.63	8.23	8.53	7.78	6.81
Wisconsin .....	5.34	4.70	4.51	4.68	NA	4.60	NA	NA
Wyoming .....	3.50	NA	NA	NA	<sup>R</sup> 4.31	<sup>R</sup> 4.11	<sup>R</sup> 3.93	2.65
<b>Total .....</b>	<b>5.76</b>	<b>5.34</b>	<b>5.12</b>	<b>5.62</b>	<b>5.48</b>	<b>5.56</b>	<sup>R</sup> <b>5.66</b>	<b>5.39</b>

See footnotes at end of table.

**Table 21. Average Price of Natural Gas Sold to Commercial Consumers, by State, 1995-1997**

(Dollars per Thousand Cubic Feet) — Continued

State	1997				1996			
	April	March	February	January	Total	December	November	October
Alabama .....	7.11	7.26	6.92	6.97	6.19	6.52	6.31	6.60
Alaska .....	2.37	2.32	2.62	2.63	2.32	2.39	2.34	2.23
Arizona .....	5.09	5.27	5.11	5.01	5.01	4.99	5.02	5.16
Arkansas .....	4.90	4.86	5.07	5.42	4.68	5.59	5.02	4.72
California .....	6.10	6.71	6.98	7.18	5.94	6.36	5.49	5.68
Colorado .....	3.29	NA	NA	NA	3.67	3.32	3.41	3.69
Connecticut .....	7.24	7.66	8.45	8.09	7.41	7.90	7.84	6.19
Delaware .....	6.61	6.47	6.54	6.33	5.82	6.19	5.96	6.39
District of Columbia .....	10.06	7.61	7.97	8.24	7.37	8.01	8.02	7.93
Florida .....	6.74	6.96	6.84	6.56	6.45	6.47	6.43	6.41
Georgia .....	5.57	7.53	6.66	6.44	5.89	6.33	5.72	6.08
Hawaii .....	15.34	15.72	15.07	14.72	14.40	15.13	15.31	15.35
Idaho .....	4.62	4.36	4.29	4.30	4.56	4.34	4.63	4.86
Illinois .....	4.64	4.97	5.68	5.89	4.92	5.20	4.83	5.23
Indiana .....	5.97	5.37	5.43	5.14	4.67	4.98	4.66	5.01
Iowa .....	4.34	4.81	5.32	4.96	4.59	5.16	5.09	5.32
Kansas .....	5.17	5.46	6.25	6.12	4.61	4.90	4.56	4.69
Kentucky .....	5.85	5.72	5.80	5.61	5.09	5.67	5.50	5.80
Louisiana .....	5.08	5.78	6.48	7.08	6.08	6.87	6.58	6.15
Maine .....	8.28	8.10	8.12	7.75	7.09	7.87	7.58	6.17
Maryland .....	<sup>R</sup> 5.76	<sup>R</sup> 6.11	<sup>R</sup> 6.72	<sup>R</sup> 6.60	6.07	6.61	5.69	5.88
Massachusetts .....	7.94	8.14	8.28	7.97	6.74	7.91	7.30	4.79
Michigan .....	4.63	4.71	4.80	4.99	4.75	4.97	4.85	5.24
Minnesota .....	3.89	4.16	5.23	6.02	4.63	5.66	4.61	3.99
Mississippi .....	4.93	4.61	5.17	5.61	5.22	5.73	4.86	4.31
Missouri .....	4.55	5.07	6.47	6.58	5.35	5.83	5.32	5.36
Montana .....	4.52	4.57	4.45	4.46	4.64	4.49	4.68	5.07
Nebraska .....	<sup>R</sup> 3.91	4.23	2.54	5.91	4.47	5.38	4.03	4.93
Nevada .....	5.18	4.95	4.86	4.97	4.90	4.88	4.89	5.13
New Hampshire .....	6.52	8.67	8.81	8.41	6.74	7.75	7.78	5.86
New Jersey .....	5.57	6.99	7.10	6.73	6.14	6.31	5.71	4.61
New Mexico .....	4.63	3.54	4.37	5.36	3.35	3.34	3.20	3.48
New York .....	NA	NA	NA	NA	6.88	NA	NA	NA
North Carolina .....	6.50	7.85	7.67	7.52	6.18	6.78	6.67	6.35
North Dakota .....	3.66	3.65	4.09	4.24	3.91	4.06	3.06	3.15
Ohio .....	6.18	6.03	6.74	6.45	5.38	5.82	6.15	6.43
Oklahoma .....	4.81	5.26	5.75	6.40	4.70	5.04	4.80	5.06
Oregon .....	4.61	4.57	4.55	4.56	4.85	4.65	4.82	5.09
Pennsylvania .....	7.70	7.37	7.55	7.07	6.44	6.86	6.61	7.00
Rhode Island .....	8.46	8.17	8.20	7.88	7.50	7.89	7.78	8.23
South Carolina .....	6.74	7.20	7.54	7.46	6.26	7.01	6.37	5.66
South Dakota .....	4.04	3.96	4.28	4.61	4.20	4.34	4.20	4.07
Tennessee .....	5.01	NA	6.19	6.51	5.72	5.78	5.32	5.50
Texas .....	4.29	4.42	5.28	6.00	4.27	5.38	4.58	NA
Utah .....	3.09	3.81	3.75	3.81	3.38	3.69	3.80	2.96
Vermont .....	5.10	5.15	5.21	5.24	5.24	5.20	5.11	5.11
Virginia .....	6.29	5.93	6.61	6.97	5.93	6.74	5.94	6.08
Washington .....	4.21	4.71	4.72	4.65	4.80	4.76	4.79	4.88
West Virginia .....	6.42	6.22	6.13	6.09	6.03	5.85	6.26	5.82
Wisconsin .....	NA	5.02	5.62	6.12	4.83	5.73	4.99	3.72
Wyoming .....	3.59	<sup>R</sup> 3.46	<sup>R</sup> 3.53	<sup>R</sup> 3.41	3.68	3.08	2.60	3.73
<b>Total</b> .....	5.44	5.69	5.97	<sup>R</sup> 6.08	5.40	5.78	5.40	5.33

See footnotes at end of table.

**Table 21. Average Price of Natural Gas Sold to Commercial Consumers, by State, 1995-1997**  
(Dollars per Thousand Cubic Feet) — Continued

State	1996							
	September	August	July	June	May	April	March	February
Alabama .....	6.81	6.88	6.82	6.99	6.41	6.08	6.21	5.78
Alaska .....	2.02	2.03	2.15	2.22	2.27	2.40	2.37	2.46
Arizona .....	5.19	5.15	5.10	5.00	4.96	5.01	4.98	4.99
Arkansas .....	4.67	4.86	4.98	5.12	4.85	4.48	4.35	4.38
California .....	5.46	5.25	5.50	5.42	5.55	5.99	6.60	6.19
Colorado .....	3.93	4.03	3.91	3.79	3.64	3.69	3.84	3.69
Connecticut .....	5.95	5.70	5.89	6.48	7.28	7.76	7.73	8.33
Delaware .....	6.45	6.88	6.93	6.82	6.06	5.52	5.64	5.34
District of Columbia .....	7.35	5.87	5.82	6.32	6.28	6.89	8.74	8.14
Florida .....	6.38	6.39	6.45	6.53	6.62	6.61	6.67	6.38
Georgia .....	5.94	5.95	6.57	7.07	7.07	5.96	5.47	5.68
Hawaii .....	14.62	14.94	15.33	14.64	14.41	13.58	13.84	13.39
Idaho .....	4.91	4.92	4.93	4.78	4.78	4.67	4.43	4.42
Illinois .....	6.25	7.66	7.09	6.68	6.19	5.00	4.75	4.31
Indiana .....	5.97	5.87	5.86	5.72	5.30	4.97	4.39	4.20
Iowa .....	5.62	8.72	5.98	5.11	4.45	3.84	4.10	4.04
Kansas .....	5.44	5.98	3.72	4.63	4.73	4.36	4.64	4.53
Kentucky .....	5.95	6.34	5.82	5.62	5.78	4.92	4.58	4.53
Louisiana .....	5.90	6.11	6.63	6.10	6.54	6.40	5.46	5.34
Maine .....	6.55	6.57	7.96	6.44	6.31	7.22	7.32	7.32
Maryland .....	6.27	6.51	6.34	6.34	6.13	5.71	6.15	6.21
Massachusetts .....	4.88	4.87	5.06	4.78	4.30	7.41	7.43	7.56
Michigan .....	5.52	6.09	5.92	5.59	4.78	4.57	4.52	4.52
Minnesota .....	4.26	4.95	4.88	4.66	4.52	4.44	4.38	4.38
Mississippi .....	4.25	4.14	4.32	4.33	12.85	4.84	4.83	4.53
Missouri .....	5.94	6.37	6.02	5.63	5.41	5.14	5.28	5.18
Montana .....	5.27	5.32	5.17	4.75	4.66	4.53	4.54	4.51
Nebraska .....	3.35	4.37	4.16	4.26	5.40	4.34	4.37	4.53
Nevada .....	5.14	5.10	4.92	4.92	4.93	4.90	4.86	4.84
New Hampshire .....	6.14	6.23	6.29	5.91	5.36	5.79	7.00	6.94
New Jersey .....	4.50	4.47	4.78	4.65	5.02	5.46	5.87	5.84
New Mexico .....	4.17	3.37	2.78	2.75	4.23	3.36	3.56	3.57
New York .....	NA	NA	NA	NA	NA	NA	NA	NA
North Carolina .....	6.38	6.37	7.14	5.67	6.24	5.85	6.36	6.12
North Dakota .....	3.77	4.98	6.54	5.55	4.49	4.13	3.36	4.15
Ohio .....	6.67	6.88	6.29	5.95	5.61	5.01	5.03	5.08
Oklahoma .....	5.03	5.12	4.72	4.99	4.97	4.44	4.64	4.50
Oregon .....	5.11	5.09	5.09	4.83	4.81	4.92	4.81	4.80
Pennsylvania .....	7.53	7.26	7.33	7.11	6.85	6.86	6.25	5.62
Rhode Island .....	7.95	7.95	8.11	7.71	7.29	7.55	7.46	7.43
South Carolina .....	5.76	5.74	5.69	5.80	5.87	6.05	6.49	6.66
South Dakota .....	5.15	8.54	5.68	5.55	4.72	4.36	3.47	4.04
Tennessee .....	6.05	6.33	5.91	6.08	5.98	5.97	5.94	5.80
Texas .....	4.33	3.89	3.82	3.81	3.81	3.91	4.25	4.28
Utah .....	3.07	3.32	3.25	3.34	3.01	2.86	3.69	3.06
Vermont .....	5.19	5.44	5.45	5.56	5.38	5.24	5.19	5.24
Virginia .....	6.47	6.65	6.73	6.25	5.17	5.66	5.44	5.94
Washington .....	5.03	5.10	5.16	4.77	4.78	4.80	4.76	4.76
West Virginia .....	6.27	4.85	4.67	8.07	6.83	6.34	6.10	6.03
Wisconsin .....	4.08	4.66	4.72	4.49	4.22	4.80	4.79	4.67
Wyoming .....	4.06	3.90	4.13	4.11	3.98	4.03	4.08	3.80
<b>Total .....</b>	<b>5.46</b>	<b>5.56</b>	<b>5.46</b>	<b>5.43</b>	<b>5.40</b>	<b>5.34</b>	<b>5.36</b>	<b>5.25</b>

<sup>R</sup> = Revised Data.

NA = Not Available.

Notes: Data for 1996 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. Average prices for gas delivered to commercial consumers reflect onsystem sales prices only. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy. See Table 24 for data on onsystem sales expressed as a percentage of both total commercial and total industrial deliveries. In 1996, consumption of natural gas for agricultural use is classified as industrial use. In 1995 and earlier years, agricultural use was classified as commercial use. See Explanatory Note 5 for further explanation.

Source: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

**Table 22. Average Price of Natural Gas Sold to Industrial Consumers, by State,  
1995-1997**  
(Dollars per Thousand Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997				
				September	August	July	June	May
Alabama .....	3.40	3.58	2.94	3.21	3.21	3.08	3.20	3.19
Alaska .....	1.53	1.44	1.45	1.57	1.56	1.56	1.48	1.44
Arizona .....	3.64	3.80	3.69	3.26	3.10	3.16	3.90	3.90
Arkansas .....	3.58	3.13	2.78	3.58	3.57	3.42	3.37	3.17
California .....	3.96	3.67	3.68	3.50	3.42	3.79	4.00	2.51
Colorado .....	2.48	0.53	NA	NA	NA	NA	NA	NA
Connecticut .....	4.72	4.74	4.31	4.07	3.86	3.93	4.02	4.22
Delaware .....	4.22	4.20	2.90	4.06	4.07	4.04	3.99	3.62
District of Columbia .....	—	—	—	—	—	—	—	—
Florida .....	4.52	4.19	3.23	NA	4.64	4.32	4.40	4.34
Georgia .....	5.32	4.43	3.70	6.43	4.68	4.81	6.14	4.67
Hawaii .....	—	—	—	NA	—	—	—	—
Idaho <sup>a</sup> .....	2.73	2.86	3.65	NA	2.68	2.80	2.52	2.73
Illinois .....	4.60	4.12	3.70	3.83	4.48	4.15	3.16	3.00
Indiana .....	4.26	NA	3.41	4.07	3.95	3.91	4.38	4.50
Iowa .....	3.89	3.53	3.33	3.90	3.52	4.11	3.37	3.96
Kansas .....	3.01	2.93	2.17	3.44	3.10	3.01	3.03	2.57
Kentucky .....	4.16	3.79	3.25	3.99	3.87	3.90	3.61	3.73
Louisiana .....	3.20	2.73	1.77	NA	2.92	NA	3.14	2.85
Maine .....	5.42	5.04	4.43	4.65	4.43	4.40	4.45	4.10
Maryland .....	4.73	5.42	3.31	4.87	<sup>R</sup> 4.49	<sup>R</sup> 5.38	<sup>R</sup> 4.67	<sup>R</sup> 4.71
Massachusetts .....	5.84	5.31	4.38	4.19	4.02	4.19	3.73	4.63
Michigan .....	4.17	3.84	3.62	4.16	4.53	4.60	4.41	4.24
Minnesota .....	3.09	2.88	2.43	3.06	2.74	2.58	2.72	2.67
Mississippi .....	3.38	3.35	2.71	NA	NA	NA	3.21	3.06
Missouri .....	4.50	4.23	3.40	3.89	3.88	3.81	3.81	3.45
Montana .....	4.85	4.85	4.86	4.98	4.98	4.96	4.88	4.85
Nebraska .....	3.59	3.13	2.85	3.48	3.38	3.09	3.02	2.77
Nevada .....	6.69	4.95	5.42	9.23	7.42	7.08	7.50	7.77
New Hampshire .....	4.44	4.18	3.78	NA	3.46	3.42	3.62	3.12
New Jersey .....	3.72	3.81	3.06	3.31	2.72	3.35	3.32	3.09
New Mexico .....	3.22	3.12	3.57	3.24	3.02	2.92	3.71	2.96
New York .....	4.92	5.09	4.58	4.20	NA	NA	NA	NA
North Carolina .....	4.62	4.21	3.48	4.30	2.83	4.00	3.64	4.01
North Dakota .....	3.10	3.18	2.85	3.35	3.66	3.14	3.02	2.42
Ohio .....	5.77	4.16	3.96	5.55	5.38	4.42	6.96	4.50
Oklahoma .....	3.99	3.16	2.25	3.44	3.33	3.34	3.32	2.75
Oregon .....	3.15	3.20	3.44	3.03	2.96	3.15	3.10	3.15
Pennsylvania .....	4.87	4.16	4.04	4.21	4.14	5.89	4.70	4.48
Rhode Island .....	4.27	NA	4.18	4.08	3.66	3.78	3.74	4.72
South Carolina .....	3.27	3.69	3.05	3.23	3.25	1.78	3.32	3.26
South Dakota .....	3.96	NA	3.55	4.16	3.96	4.49	4.08	3.55
Tennessee .....	3.83	3.89	3.39	3.89	3.44	3.09	NA	3.19
Texas .....	2.65	NA	1.64	NA	2.34	2.41	2.46	2.31
Utah .....	2.48	2.08	2.38	2.61	2.81	2.70	2.27	2.27
Vermont .....	3.06	3.51	3.48	3.00	2.96	2.97	3.01	3.05
Virginia .....	4.01	4.18	3.34	3.98	3.95	3.82	3.88	4.03
Washington .....	3.08	2.53	2.72	NA	NA	NA	2.81	2.94
West Virginia .....	2.91	2.71	2.53	2.93	2.84	2.91	2.72	2.81
Wisconsin .....	3.83	3.31	2.90	3.47	3.23	3.26	NA	3.08
Wyoming .....	3.36	NA	NA	NA	<sup>R</sup> 3.34	<sup>R</sup> 3.38	3.35	3.24
<b>Total</b> .....	3.45	3.31	2.60	3.23	2.96	<sup>R</sup> 2.96	<sup>R</sup> 3.10	2.95

See footnotes at end of table.



**Table 22. Average Price of Natural Gas Sold to Industrial Consumers, by State, 1995-1997**

(Dollars per Thousand Cubic Feet) — Continued

State	1997				1996			
	April	March	February	January	Total	December	November	October
Alabama .....	2.96	3.15	3.91	4.57	3.64	4.61	3.72	3.14
Alaska .....	1.53	1.55	1.57	1.55	1.41	1.35	1.35	1.35
Arizona .....	4.31	4.06	3.74	4.32	3.80	3.81	3.80	3.78
Arkansas .....	3.19	3.31	3.78	4.45	3.28	4.33	3.72	3.00
California .....	3.45	4.24	5.32	5.49	3.77	4.40	4.01	3.32
Colorado .....	2.17	NA	NA	NA	2.91	1.01	0.94	2.13
Connecticut .....	4.46	4.91	5.76	6.11	4.80	5.81	4.95	4.00
Delaware .....	3.62	4.35	5.03	5.29	4.32	5.00	4.62	4.62
District of Columbia .....	—	—	—	—	—	—	—	—
Florida .....	4.41	4.42	4.68	4.69	4.21	4.52	4.29	3.96
Georgia .....	4.39	5.07	5.63	6.40	4.40	4.87	3.76	4.16
Hawaii .....	—	—	—	—	—	—	—	—
Idaho <sup>a</sup> .....	2.75	2.75	2.76	2.78	2.78	2.42	2.51	2.76
Illinois .....	4.10	4.80	5.86	6.49	4.12	4.15	4.09	4.17
Indiana .....	4.67	4.41	4.21	4.19	3.62	4.16	3.52	3.52
Iowa .....	3.14	4.04	4.73	3.94	3.63	3.96	3.82	3.46
Kansas .....	2.32	2.34	3.45	4.33	3.09	4.85	3.37	2.44
Kentucky .....	3.82	3.97	4.67	4.78	3.87	4.64	3.92	3.73
Louisiana .....	2.78	2.69	3.49	4.19	2.84	4.07	NA	NA
Maine .....	5.77	7.08	7.10	6.95	5.22	6.60	6.56	4.04
Maryland .....	<sup>R</sup> 20.15	<sup>R</sup> 5.67	NA	<sup>R</sup> 5.31	5.36	4.63	6.00	7.80
Massachusetts .....	6.35	7.12	8.35	7.05	5.37	6.98	5.52	4.15
Michigan .....	4.12	4.15	4.02	4.16	3.87	4.06	3.97	3.74
Minnesota .....	2.58	2.74	3.73	4.69	2.97	4.18	3.09	2.12
Mississippi .....	2.98	2.93	3.80	4.45	3.43	4.47	3.59	2.87
Missouri .....	3.78	4.48	5.94	5.35	4.35	4.84	4.02	3.75
Montana .....	4.84	4.84	4.80	4.79	4.88	4.87	4.95	5.02
Nebraska .....	2.66	3.19	4.14	5.13	3.29	4.30	3.62	2.71
Nevada .....	5.80	4.67	4.64	9.50	4.90	4.67	4.68	5.01
New Hampshire .....	4.02	6.10	7.97	7.94	4.79	6.84	5.13	7.64
New Jersey .....	2.87	4.82	5.03	4.92	3.82	4.62	3.70	3.05
New Mexico .....	5.10	3.40	4.02	3.01	2.90	2.63	2.78	2.98
New York .....	NA	NA	NA	NA	5.04	5.17	4.79	4.45
North Carolina .....	4.14	4.80	5.41	5.63	4.37	5.14	4.65	4.05
North Dakota .....	2.37	1.60	4.94	4.39	3.02	3.89	2.36	2.28
Ohio .....	5.96	5.49	6.71	5.77	4.10	2.79	5.14	4.84
Oklahoma .....	3.08	3.90	4.53	5.41	3.26	3.87	3.33	3.28
Oregon .....	3.16	3.25	3.24	3.25	3.24	3.29	3.36	3.52
Pennsylvania .....	4.73	4.91	5.25	5.25	4.12	3.87	4.15	3.97
Rhode Island .....	3.56	4.50	5.52	5.64	4.67	9.64	4.62	3.70
South Carolina .....	3.21	3.43	4.22	4.74	3.77	4.58	4.03	3.29
South Dakota .....	3.12	3.00	4.00	4.99	3.50	6.16	4.81	4.73
Tennessee .....	3.40	NA	4.75	4.80	3.92	4.52	3.95	3.52
Texas .....	2.03	2.08	3.19	4.10	2.58	3.82	2.89	2.06
Utah .....	2.31	2.53	2.53	2.44	2.10	2.28	2.22	1.97
Vermont .....	2.98	3.10	3.14	3.32	3.44	3.18	3.20	3.44
Virginia .....	3.11	4.79	5.51	3.56	4.07	3.91	3.53	4.14
Washington .....	2.75	2.88	3.58	4.36	2.67	3.81	2.78	2.52
West Virginia .....	2.49	2.78	3.03	3.44	2.76	2.96	3.06	2.70
Wisconsin .....	NA	3.44	4.27	4.86	3.48	4.79	4.10	2.67
Wyoming .....	3.40	3.40	3.41	3.40	3.14	3.25	3.32	3.29
<b>Total</b> .....	3.01	<sup>R</sup> 3.39	<sup>R</sup> 4.19	4.60	3.42	4.20	3.57	2.89

See footnotes at end of table.

**Table 22. Average Price of Natural Gas Sold to Industrial Consumers, by State, 1995-1997**

(Dollars per Thousand Cubic Feet) — Continued

State	1996							
	September	August	July	June	May	April	March	February
Alabama .....	2.94	3.50	3.52	3.36	3.30	3.67	3.87	3.95
Alaska .....	1.35	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Arizona .....	3.76	3.68	3.58	3.84	3.84	3.84	3.86	3.88
Arkansas .....	3.07	3.09	3.18	3.06	3.06	3.07	3.29	3.05
California .....	3.57	3.55	3.63	3.37	3.28	3.60	3.67	3.88
Colorado .....	0.46	0.27	0.24	1.89	1.94	0.68	0.45	0.54
Connecticut .....	3.98	3.83	4.01	4.06	4.21	4.69	5.21	5.68
Delaware .....	4.58	4.71	4.67	4.29	4.79	3.99	3.88	4.10
District of Columbia .....	—	—	—	—	—	—	—	—
Florida .....	3.87	4.08	4.12	4.14	4.08	4.51	4.16	4.49
Georgia .....	2.73	4.08	6.69	5.42	4.47	4.10	4.56	4.59
Hawaii .....	—	—	—	—	—	—	—	—
Idaho <sup>a</sup> .....	2.75	2.74	2.92	2.79	2.84	2.76	2.92	2.91
Illinois .....	5.04	4.98	4.81	5.34	4.55	3.25	4.63	3.82
Indiana .....	3.91	3.99	3.70	3.91	4.05	3.70	3.41	3.58
Iowa .....	3.95	3.57	4.43	4.28	3.57	3.10	3.37	3.41
Kansas .....	3.04	3.21	2.67	2.00	2.62	2.17	3.80	3.23
Kentucky .....	3.65	3.97	3.74	3.63	3.78	3.73	3.77	3.81
Louisiana .....	2.08	2.36	2.84	2.71	2.56	2.85	3.13	2.77
Maine .....	3.96	3.96	4.15	3.95	5.04	6.17	6.27	6.39
Maryland .....	6.18	7.39	6.35	6.08	6.06	5.39	5.11	5.80
Massachusetts .....	3.75	3.71	3.98	3.74	4.44	5.81	6.41	6.88
Michigan .....	3.30	3.47	3.51	3.49	3.62	3.79	3.98	4.01
Minnesota .....	2.35	2.99	2.91	2.65	2.67	3.34	2.91	2.65
Mississippi .....	2.85	3.20	3.43	3.23	3.14	3.47	3.58	3.26
Missouri .....	4.12	4.27	4.23	3.88	3.26	4.20	4.90	4.56
Montana .....	5.04	5.16	5.09	5.01	4.65	4.84	4.74	4.72
Nebraska .....	2.86	3.42	3.19	3.09	2.92	3.13	3.10	3.19
Nevada .....	5.10	5.15	4.80	4.86	4.90	4.91	4.96	4.98
New Hampshire .....	3.48	3.34	3.46	3.38	3.44	4.21	5.36	6.00
New Jersey .....	3.01	3.29	3.17	3.28	3.31	4.12	4.26	4.71
New Mexico .....	3.57	3.44	2.89	2.69	3.31	3.17	4.53	4.03
New York .....	4.16	4.66	4.73	4.63	4.91	5.40	5.34	5.75
North Carolina .....	4.03	3.82	3.87	3.64	3.84	3.90	4.62	5.04
North Dakota .....	2.77	2.99	3.34	3.01	3.16	3.28	3.09	3.28
Ohio .....	4.51	4.75	4.96	4.06	4.22	4.26	4.19	3.91
Oklahoma .....	3.57	3.30	3.36	3.41	3.01	2.99	3.11	3.05
Oregon .....	3.17	3.21	3.30	3.23	3.18	3.12	3.25	3.23
Pennsylvania .....	3.94	3.90	3.72	3.79	3.90	4.09	4.10	4.52
Rhode Island .....	3.84	3.82	4.30	3.89	4.11	4.46	5.63	5.45
South Carolina .....	3.30	3.43	3.54	3.37	3.41	3.79	4.02	4.25
South Dakota .....	5.36	5.26	4.81	5.44	4.63	4.55	2.02	2.88
Tennessee .....	3.80	4.11	3.81	3.57	3.81	4.02	4.08	4.29
Texas .....	2.11	2.53	2.66	2.46	2.39	2.49	2.29	2.66
Utah .....	2.00	2.03	1.97	2.02	2.06	2.08	2.36	1.82
Vermont .....	3.17	3.31	3.37	3.55	3.74	3.75	3.54	3.63
Virginia .....	4.10	4.32	4.45	3.77	3.58	4.82	4.05	4.33
Washington .....	1.93	3.84	2.36	2.79	2.48	2.47	2.53	2.63
West Virginia .....	2.78	2.41	2.61	2.72	2.66	2.87	2.89	2.83
Wisconsin .....	2.74	3.05	3.26	3.08	3.02	3.47	3.38	3.39
Wyoming .....	3.19	3.15	3.10	2.97	3.28	3.22	3.24	2.65
<b>Total .....</b>	<b>2.77</b>	<b>3.05</b>	<b>3.17</b>	<b>3.13</b>	<b>3.14</b>	<b>3.42</b>	<b>3.52</b>	<b>3.61</b>

<sup>R</sup> = Revised Data.

<sup>NA</sup> = Not Available.

— = Not Applicable.

Notes: Data for 1996 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. Average prices for gas delivered to industrial consumers reflect onsystem sales prices only. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy. See Table 24 for data on onsystem sales expressed as a percentage of both total commercial and total industrial deliveries. In 1996, consumption of natural gas for agricultural use is classified as industrial use. In 1995 and earlier years, agricultural use was classified as commercial use. See Explanatory Note 5 for further explanation.

Source: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

**Table 23. Average Price of Natural Gas Delivered to Electric Utility<sup>a</sup> Consumers,  
by State, 1996-1997**  
(Dollars per Thousand Cubic Feet)

State	YTD 1997	YTD 1996	YTD 1995	1997				
				August	July	June	May	April
Alabama .....	2.59	2.84	1.87	2.56	2.51	2.65	2.44	3.21
Alaska .....	1.69	1.35	1.30	1.69	1.87	1.79	1.64	1.63
Arizona .....	2.84	2.95	1.71	2.63	2.20	3.03	3.11	4.47
Arkansas .....	2.47	2.54	1.70	2.64	2.38	2.40	1.92	1.98
California .....	2.97	2.59	2.28	2.81	2.69	2.75	2.60	2.63
Colorado .....	3.48	1.88	1.70	2.77	4.07	2.31	6.20	2.47
Connecticut .....	2.42	2.81	2.03	2.35	2.33	2.26	2.22	2.22
Delaware .....	3.04	3.44	2.22	3.00	2.83	1.95	3.68	2.53
District of Columbia .....	—	—	—	—	—	—	—	—
Florida .....	2.37	3.16	2.18	2.50	2.30	2.33	2.09	2.26
Georgia .....	2.60	3.01	2.81	2.27	2.75	3.13	2.64	2.64
Hawaii .....	—	—	—	—	—	—	—	—
Idaho .....	—	—	—	—	—	—	—	—
Illinois .....	2.35	2.64	1.58	2.39	2.31	2.37	2.29	2.12
Indiana .....	3.03	3.33	2.38	3.39	2.77	2.99	3.06	2.88
Iowa .....	3.13	3.21	2.60	3.12	2.70	3.28	2.89	2.79
Kansas .....	2.18	2.24	1.55	2.13	2.06	2.11	2.14	2.00
Kentucky .....	3.14	3.45	2.92	2.92	2.87	2.96	2.83	3.13
Louisiana .....	2.63	2.99	1.80	2.60	2.44	2.65	2.45	2.18
Maine .....	—	—	—	—	—	—	—	—
Maryland .....	2.80	3.12	2.24	2.89	2.35	2.69	2.98	3.14
Massachusetts .....	2.91	3.30	1.98	2.87	2.81	2.92	2.84	2.54
Michigan .....	0.68	0.81	0.78	0.58	0.96	0.84	0.42	0.61
Minnesota .....	2.36	2.22	1.75	2.43	2.43	2.34	2.30	2.34
Mississippi .....	2.58	3.07	1.70	2.61	2.46	2.52	2.37	2.27
Missouri .....	2.51	2.55	1.64	2.51	2.39	2.44	2.74	2.77
Montana .....	3.42	6.57	4.35	1.92	1.37	9.35	13.57	2.87
Nebraska .....	2.30	1.96	1.67	2.49	2.32	2.00	1.89	1.89
Nevada .....	2.04	2.03	1.64	2.02	1.98	2.09	1.99	2.02
New Hampshire .....	2.69	—	1.85	2.55	2.74	2.72	2.68	—
New Jersey .....	2.88	3.06	2.07	2.87	2.80	2.85	2.76	2.69
New Mexico .....	2.52	2.12	1.52	2.47	2.46	2.38	2.39	2.07
New York .....	2.72	3.05	2.08	2.60	2.58	2.65	2.62	2.53
North Carolina .....	3.05	3.12	2.43	3.09	3.12	2.87	2.64	2.79
North Dakota .....	3.81	3.06	3.74	—	4.00	—	4.14	3.98
Ohio .....	3.45	3.19	2.28	4.28	3.10	3.20	4.13	4.06
Oklahoma .....	2.78	2.94	2.25	2.48	2.37	2.63	2.91	2.57
Oregon .....	1.51	1.24	1.24	1.49	1.35	1.57	—	—
Pennsylvania .....	2.77	3.13	2.07	2.81	2.54	3.04	2.57	2.31
Rhode Island .....	3.16	2.29	2.00	3.04	2.98	3.21	3.09	2.82
South Carolina .....	4.12	4.12	1.70	4.54	4.35	3.51	3.84	3.87
South Dakota .....	—	2.36	1.48	—	—	—	—	—
Tennessee .....	—	1.20	0.79	—	—	—	—	—
Texas .....	2.54	2.48	1.88	2.50	2.39	2.46	2.34	2.14
Utah .....	1.86	3.07	2.54	1.79	1.86	4.82	—	—
Vermont .....	3.02	3.16	1.95	2.90	2.95	—	2.83	2.27
Virginia .....	2.78	2.98	2.72	2.95	2.58	2.93	3.05	2.71
Washington .....	1.55	5.15	4.59	0.67	4.83	3.83	7.21	5.93
West Virginia .....	4.02	3.53	3.66	3.71	3.79	3.23	3.22	3.63
Wisconsin .....	2.96	2.89	2.07	2.85	3.12	2.81	2.58	2.46
Wyoming .....	13.55	11.28	7.89	34.13	20.44	4.00	11.82	24.02
<b>Total .....</b>	<b>2.59</b>	<b>2.67</b>	<b>1.96</b>	<b>2.54</b>	<b>2.44</b>	<b>2.52</b>	<b>2.41</b>	<b>2.30</b>

See footnotes at end of table.

**Table 23. Average Price of Natural Gas Delivered to Electric Utility<sup>a</sup> Consumers,  
by State, 1996-1997**

(Dollars per Thousand Cubic Feet) — Continued

State	1997			1996				
	March	February	January	Total	December	November	October	September
Alabama .....	2.12	2.04	4.37	2.95	4.32	3.16	2.27	2.14
Alaska .....	1.55	1.69	1.68	1.45	1.64	1.63	1.73	1.71
Arizona .....	2.85	4.01	5.70	3.03	7.53	4.76	2.53	2.98
Arkansas .....	1.60	1.92	4.18	2.52	3.88	2.62	1.36	1.89
California .....	3.04	4.14	4.67	2.75	4.55	3.40	2.60	2.51
Colorado .....	2.26	3.32	3.76	2.09	4.30	2.93	2.47	1.54
Connecticut .....	2.45	3.08	3.97	2.76	4.97	3.26	2.78	2.30
Delaware .....	2.61	2.90	4.87	3.13	4.06	3.65	2.32	2.32
District of Columbia .....	—	—	—	—	—	—	—	—
Florida .....	2.05	2.13	4.60	3.12	4.75	3.38	2.56	2.59
Georgia .....	3.34	8.15	2.08	2.88	6.28	2.50	3.08	2.72
Hawaii .....	—	—	—	—	—	—	—	—
Idaho .....	—	—	—	—	—	—	—	—
Illinois .....	2.00	2.93	3.34	2.62	3.82	3.10	2.12	1.98
Indiana .....	2.74	3.74	5.04	3.48	4.80	3.86	3.38	2.99
Iowa .....	2.73	3.74	5.11	3.23	3.77	3.45	2.95	1.80
Kansas .....	1.80	2.92	4.56	2.25	4.10	2.62	1.88	1.81
Kentucky .....	3.20	3.69	4.85	3.49	4.64	3.51	2.82	2.59
Louisiana .....	2.10	2.93	4.35	2.94	4.37	3.12	2.25	2.16
Maine .....	—	—	—	—	—	—	—	—
Maryland .....	4.18	5.75	5.04	3.11	5.92	4.02	2.65	2.85
Massachusetts .....	2.64	3.29	5.37	3.07	4.85	3.85	2.69	2.33
Michigan .....	0.69	0.59	0.56	0.74	0.55	0.73	0.55	0.59
Minnesota .....	2.17	3.35	2.26	2.18	2.32	2.19	2.14	2.14
Mississippi .....	2.08	2.61	4.15	2.78	4.27	3.23	2.10	2.00
Missouri .....	2.26	4.62	5.41	2.58	4.90	2.61	2.38	2.24
Montana .....	4.08	9.68	3.54	2.89	1.81	1.66	0.65	6.59
Nebraska .....	2.29	3.20	3.22	2.07	4.37	2.85	1.85	1.81
Nevada .....	2.05	2.33	2.14	2.12	2.19	2.37	2.71	1.96
New Hampshire .....	—	—	—	—	—	—	—	—
New Jersey .....	2.57	3.60	4.65	2.96	4.39	3.16	2.36	2.42
New Mexico .....	2.01	2.85	4.07	2.31	3.80	2.94	2.17	1.94
New York .....	2.56	3.35	4.36	2.96	4.22	3.39	2.37	2.26
North Carolina .....	—	—	6.89	3.11	4.41	4.20	2.55	2.80
North Dakota .....	2.93	—	—	2.93	2.81	3.92	2.94	—
Ohio .....	4.03	4.16	3.87	3.44	4.27	3.92	2.96	2.80
Oklahoma .....	2.88	4.36	4.21	2.98	4.43	3.61	2.93	2.38
Oregon .....	1.40	—	1.96	1.33	2.01	1.42	1.42	1.27
Pennsylvania .....	2.72	2.91	4.65	2.85	4.57	3.31	2.70	1.67
Rhode Island .....	2.90	4.09	3.18	2.29	3.14	2.34	1.81	1.78
South Carolina .....	2.84	4.22	6.95	4.56	5.08	4.47	5.32	4.01
South Dakota .....	—	—	—	2.36	—	—	—	—
Tennessee .....	—	—	—	2.61	—	—	—	—
Texas .....	2.12	2.85	3.89	2.51	3.80	2.82	2.23	2.10
Utah .....	—	—	—	1.83	—	—	—	1.50
Vermont .....	2.61	3.60	5.05	3.22	4.42	3.37	2.68	2.70
Virginia .....	2.76	1.80	3.13	2.98	3.42	2.04	3.77	2.93
Washington .....	65.04	4.50	5.11	4.98	4.75	5.03	4.35	4.01
West Virginia .....	3.82	7.68	3.15	2.99	2.94	2.87	3.69	—
Wisconsin .....	2.33	3.42	4.74	3.04	4.29	3.48	2.55	2.38
Wyoming .....	22.85	2.47	13.99	12.59	26.41	17.57	17.64	3.19
<b>Total .....</b>	<b>2.30</b>	<b>2.98</b>	<b>4.04</b>	<b>2.69</b>	<b>3.98</b>	<b>3.04</b>	<b>2.37</b>	<b>2.24</b>

See footnotes at end of table.

**Table 23. Average Price of Natural Gas Delivered to Electric Utility<sup>a</sup> Consumers, by State, 1996-1997**

(Dollars per Thousand Cubic Feet) — Continued

State	1996							
	August	July	June	May	April	March	February	January
Alabama .....	2.66	3.04	2.71	2.59	3.10	3.29	2.82	3.71
Alaska .....	1.66	1.58	1.47	1.04	1.16	1.30	1.29	1.32
Arizona .....	2.61	3.09	3.33	4.43	2.30	2.31	3.19	2.71
Arkansas .....	2.47	2.57	2.40	2.30	2.54	2.71	7.11	2.02
California .....	2.63	2.32	2.41	2.59	2.49	2.83	3.16	2.68
Colorado .....	1.72	2.32	1.52	1.85	2.06	1.79	1.83	1.80
Connecticut .....	2.78	3.01	2.69	2.62	2.79	—	—	—
Delaware .....	2.35	3.39	3.01	3.19	4.14	2.89	4.63	4.63
District of Columbia .....	—	—	—	—	—	—	—	—
Florida .....	2.99	3.28	3.09	2.91	3.18	3.50	2.83	3.87
Georgia .....	2.51	2.23	3.25	3.80	5.05	5.18	4.90	7.30
Hawaii .....	—	—	—	—	—	—	—	—
Idaho .....	—	—	—	—	—	—	—	—
Illinois .....	2.25	2.70	2.60	2.43	3.03	3.12	3.24	3.19
Indiana .....	2.95	3.14	3.32	3.21	3.40	3.85	3.98	3.39
Iowa .....	2.87	2.83	2.55	2.64	3.82	5.45	3.44	3.36
Kansas .....	2.35	2.19	2.16	2.13	2.45	2.18	2.46	2.28
Kentucky .....	3.05	3.36	3.15	3.78	3.40	3.72	3.57	3.96
Louisiana .....	2.64	2.96	2.72	2.63	2.99	3.25	4.04	3.72
Maine .....	—	—	—	—	—	—	—	—
Maryland .....	2.49	3.25	3.12	3.13	3.97	5.72	6.54	6.01
Massachusetts .....	2.71	3.37	3.03	3.08	3.62	4.17	3.70	6.47
Michigan .....	0.91	0.73	0.88	0.90	0.71	0.83	0.90	0.65
Minnesota .....	2.10	2.14	2.09	2.36	2.63	2.43	2.13	2.10
Mississippi .....	2.52	2.85	2.64	2.49	2.95	3.50	8.16	4.08
Missouri .....	2.41	2.63	2.50	2.42	2.20	3.37	3.12	3.11
Montana .....	6.79	3.49	4.69	5.95	8.98	20.05	3.68	1.86
Nebraska .....	2.16	2.27	1.74	1.58	1.94	2.39	2.19	1.96
Nevada .....	2.20	1.83	2.06	1.90	2.08	2.14	2.22	1.99
New Hampshire .....	—	—	—	—	—	—	—	—
New Jersey .....	2.79	3.15	3.14	3.37	3.50	3.67	2.85	2.76
New Mexico .....	2.33	2.01	1.99	2.04	2.17	2.23	2.16	2.07
New York .....	2.74	3.06	2.89	2.80	3.35	3.72	3.91	4.49
North Carolina .....	3.31	3.51	2.93	2.66	3.23	—	—	3.07
North Dakota .....	3.32	2.71	2.81	2.91	—	—	—	3.58
Ohio .....	2.70	3.18	3.51	2.99	3.48	3.74	3.54	3.94
Oklahoma .....	2.64	2.70	2.72	2.95	3.15	3.35	4.13	3.13
Oregon .....	1.24	1.25	—	—	—	—	—	—
Pennsylvania .....	2.63	3.52	2.74	3.38	2.64	3.61	5.41	4.57
Rhode Island .....	2.32	2.27	2.13	2.10	2.36	2.37	2.45	2.38
South Carolina .....	4.67	3.94	3.69	4.75	4.44	4.72	4.35	4.23
South Dakota .....	—	2.36	—	—	—	—	—	—
Tennessee .....	—	—	—	—	—	—	—	—
Texas .....	2.45	2.63	2.46	2.35	2.48	2.35	2.60	2.48
Utah .....	1.67	1.57	2.39	—	—	—	20.25	—
Vermont .....	3.15	3.45	3.17	—	2.72	—	—	3.06
Virginia .....	2.83	3.36	3.14	3.61	1.51	3.09	1.99	2.41
Washington .....	4.98	6.14	5.52	4.05	4.22	5.51	4.90	4.98
West Virginia .....	3.28	3.35	3.31	2.82	3.00	2.70	2.75	5.00
Wisconsin .....	2.87	2.97	2.56	2.71	3.01	4.19	2.88	2.64
Wyoming .....	7.72	3.19	6.99	3.44	30.24	18.59	23.99	6.80
<b>Total .....</b>	<b>2.57</b>	<b>2.69</b>	<b>2.59</b>	<b>2.52</b>	<b>2.68</b>	<b>2.73</b>	<b>3.07</b>	<b>2.87</b>

<sup>a</sup> Includes all steam electric utility generating plants with a combined capacity of 50 megawatts or greater.

— = Not Applicable.

Notes: Data for 1996 are final. All other data are preliminary unless otherwise indicated. Geographic coverage is the 50 States and the District of Columbia. See Appendix A, Explanatory Note 5 for discussion of computations and revision policy.

Sources: Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," and Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

**Table 24. Percentage of Total Deliveries Represented by Onsystem Sales, by State, 1995-1997**

State	YTD 1997		YTD 1996		YTD 1995		1997	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	September	
							Commercial	Industrial
Alabama .....	54.8	17.7	82.5	22.9	81.4	23.4	33.1	17.6
Alaska .....	64.1	97.1	65.6	62.9	82.4	50.0	59.0	100.0
Arizona .....	84.8	24.3	85.6	20.2	88.6	25.7	83.9	30.3
Arkansas .....	94.2	10.6	95.3	12.8	95.7	13.9	90.9	8.7
California .....	50.6	10.2	55.2	10.4	53.5	13.0	40.9	9.9
Colorado .....	95.3	21.5	93.3	22.0	94.7	25.6	NA	NA
Connecticut .....	85.0	67.3	87.6	88.3	79.9	84.5	74.9	65.5
Delaware .....	100.0	30.7	100.0	39.4	100.0	68.5	100.0	25.7
District of Columbia .....	58.8	—	74.5	—	77.6	—	35.5	—
Florida .....	97.0	6.4	97.2	13.3	97.7	15.9	96.9	NA
Georgia .....	87.9	15.9	94.7	33.3	92.8	33.8	81.6	9.1
Hawaii .....	100.0	—	100.0	—	100.0	—	100.0	—
Idaho .....	87.1	2.4	87.3	1.4	86.8	2.6	NA	NA
Illinois .....	54.3	10.3	54.0	12.8	49.8	10.4	46.7	10.4
Indiana .....	76.4	12.5	NA	NA	86.5	13.6	75.4	8.4
Iowa .....	88.0	6.7	88.3	7.3	89.0	7.4	77.2	5.9
Kansas .....	66.0	9.1	70.5	7.6	72.5	12.1	50.3	6.4
Kentucky .....	89.0	15.9	91.0	29.0	88.2	26.3	83.9	13.0
Louisiana .....	89.5	8.1	98.2	10.2	98.1	29.8	71.0	NA
Maine .....	100.0	91.7	100.0	91.0	100.0	100.0	100.0	87.8
Maryland .....	73.7	12.9	91.9	12.5	97.2	14.6	49.0	2.0
Massachusetts .....	60.9	19.5	77.8	26.9	86.6	31.6	41.4	28.0
Michigan .....	63.0	6.5	67.0	9.1	65.4	9.0	38.8	3.1
Minnesota .....	98.4	41.8	96.8	40.4	94.1	33.5	97.7	41.9
Mississippi .....	94.9	36.7	97.6	41.5	97.2	42.7	NA	NA
Missouri .....	80.2	21.4	82.8	24.4	84.0	23.0	68.4	22.5
Montana .....	90.7	3.2	91.7	3.3	91.8	3.0	85.5	1.9
Nebraska .....	77.3	22.8	NA	20.3	NA	15.3	59.0	21.0
Nevada .....	71.9	1.9	75.3	1.6	77.8	1.8	62.9	4.6
New Hampshire .....	94.5	56.8	97.7	56.2	99.3	63.3	NA	NA
New Jersey .....	68.2	49.0	74.8	56.2	88.3	53.2	58.1	28.1
New Mexico .....	65.2	13.5	62.9	2.2	59.7	3.8	52.9	14.6
New York .....	57.6	6.5	NA	10.3	75.7	13.1	NA	7.3
North Carolina .....	92.9	34.2	97.3	61.2	91.1	41.8	86.4	21.2
North Dakota .....	88.7	41.4	87.8	18.2	80.9	17.3	74.7	19.4
Ohio .....	66.9	4.0	71.5	7.3	75.8	7.4	60.7	1.5
Oklahoma .....	86.3	4.7	84.8	6.6	86.2	17.5	75.5	3.2
Oregon .....	98.6	16.4	98.4	19.3	98.2	25.9	98.0	13.2
Pennsylvania .....	63.4	14.1	74.1	18.8	72.1	16.2	54.6	12.1
Rhode Island .....	83.7	18.3	94.4	NA	100.0	11.4	68.7	33.6
South Carolina .....	97.8	77.8	99.2	85.7	95.9	81.0	98.5	84.8
South Dakota .....	83.8	21.8	NA	NA	87.1	26.7	59.9	14.0
Tennessee .....	89.2	26.1	94.8	48.7	93.1	45.0	82.4	18.2
Texas .....	59.2	17.0	83.6	NA	69.5	27.9	47.0	NA
Utah .....	82.8	9.2	81.7	8.8	82.0	11.2	74.8	12.0
Vermont .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia .....	76.2	11.0	85.7	17.6	83.4	14.5	67.6	7.4
Washington .....	83.1	23.1	86.0	25.0	92.8	34.7	NA	NA
West Virginia .....	52.0	11.9	55.0	14.4	50.6	14.0	29.8	11.8
Wisconsin .....	92.4	24.0	92.1	37.7	91.7	47.8	78.2	19.1
Wyoming .....	61.1	2.1	NA	NA	NA	NA	NA	2.7
<b>Total .....</b>	<b>65.9</b>	<b>15.4</b>	<b>78.4</b>	<b>19.6</b>	<b>76.9</b>	<b>24.2</b>	<b>54.3</b>	<b>13.0</b>

See footnotes at end of table.

**Table 24. Percentage of Total Deliveries Represented by Onsystem Sales, by State, 1995-1997 — Continued**

State	1997							
	August		July		June		May	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama .....	25.1	17.4	22.8	17.3	49.5	17.2	55.5	18.0
Alaska .....	55.0	92.8	59.5	91.4	60.0	99.0	63.8	99.0
Arizona .....	78.7	30.1	79.7	31.3	82.7	18.7	86.1	18.1
Arkansas .....	91.4	7.9	89.9	9.3	90.7	10.2	91.4	11.3
California .....	41.5	7.7	45.6	7.8	48.2	8.9	49.5	13.0
Colorado .....	NA	NA	NA	NA	NA	NA	NA	NA
Connecticut .....	80.1	62.1	72.8	63.5	77.1	63.7	79.7	65.6
Delaware .....	100.0	27.5	100.0	27.5	100.0	28.2	100.0	34.4
District of Columbia .....	38.8	—	43.9	—	46.7	—	53.7	—
Florida .....	97.3	6.1	96.9	5.7	97.6	6.8	97.7	6.4
Georgia .....	80.1	15.7	79.1	17.4	82.7	13.4	83.9	12.9
Hawaii .....	100.0	—	100.0	—	100.0	—	100.0	—
Idaho .....	82.9	1.4	83.2	5.2	83.3	2.3	86.5	2.5
Illinois .....	39.4	5.3	45.8	3.4	54.8	14.7	47.4	13.8
Indiana .....	74.7	7.8	72.4	9.0	39.6	9.2	38.3	9.6
Iowa .....	84.5	6.5	75.0	5.3	90.1	5.1	83.2	5.4
Kansas .....	53.1	7.0	59.1	5.4	56.3	4.8	58.3	13.9
Kentucky .....	79.1	11.5	82.9	12.4	87.7	14.1	85.3	15.7
Louisiana .....	99.2	7.0	98.8	NA	98.6	7.6	98.5	8.4
Maine .....	100.0	88.6	100.0	100.0	100.0	88.5	100.0	91.2
Maryland .....	54.3	R4.9	57.5	R3.4	R56.5	R6.7	R62.3	R12.5
Massachusetts .....	39.1	22.4	43.6	23.6	46.1	32.3	67.1	41.7
Michigan .....	39.8	3.9	54.7	5.8	44.8	5.4	57.7	7.8
Minnesota .....	98.3	37.0	98.4	47.2	97.0	37.7	97.8	39.3
Mississippi .....	NA	NA	NA	NA	91.5	35.9	96.7	39.8
Missouri .....	68.7	16.7	68.9	18.6	71.5	18.5	76.9	24.1
Montana .....	87.4	2.0	90.4	1.7	88.7	2.2	90.2	2.1
Nebraska .....	NA	15.0	NA	41.8	61.9	18.7	NA	21.4
Nevada .....	63.1	7.0	73.2	10.2	61.0	9.9	65.7	7.4
New Hampshire .....	88.1	47.1	87.0	51.4	90.7	55.4	91.6	75.1
New Jersey .....	59.0	44.0	55.6	26.5	60.8	26.3	56.5	28.5
New Mexico .....	53.2	18.3	53.5	18.5	43.1	8.1	59.5	10.9
New York .....	NA	NA	NA	NA	NA	NA	NA	NA
North Carolina .....	84.4	24.2	84.6	20.4	97.5	40.8	89.3	21.7
North Dakota .....	68.8	28.1	46.5	45.7	80.8	28.9	88.7	36.5
Ohio .....	59.9	2.0	58.7	2.0	55.9	2.0	58.0	3.2
Oklahoma .....	73.6	3.0	79.0	3.8	79.2	2.1	82.0	4.1
Oregon .....	98.3	12.4	98.3	13.8	98.1	17.3	98.5	16.7
Pennsylvania .....	64.5	12.5	54.5	9.7	54.7	13.1	48.0	13.3
Rhode Island .....	67.9	39.6	71.1	41.7	72.4	48.1	80.8	48.5
South Carolina .....	96.4	57.3	99.9	71.9	91.0	89.0	100.0	87.0
South Dakota .....	72.1	12.7	78.3	12.0	83.7	10.7	80.7	17.3
Tennessee .....	80.4	19.8	80.7	24.4	NA	NA	86.7	29.6
Texas .....	52.3	14.1	50.6	14.2	56.6	19.1	56.5	18.1
Utah .....	71.7	7.9	72.8	8.2	77.0	9.4	78.8	9.0
Vermont .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia .....	64.6	4.9	62.9	5.5	65.3	8.1	72.2	6.5
Washington .....	NA	NA	NA	NA	79.8	25.5	80.7	21.0
West Virginia .....	21.6	11.2	23.2	11.8	29.1	11.3	43.8	11.4
Wisconsin .....	NA	17.3	91.3	17.5	NA	NA	NA	22.1
Wyoming .....	R75.8	2.1	R28.8	R2.1	R52.1	1.9	R77.8	R1.8
<b>Total .....</b>	<b>53.8</b>	<b>R12.9</b>	<b>R55.3</b>	<b>R13.4</b>	<b>R57.1</b>	<b>15.2</b>	<b>59.7</b>	<b>15.6</b>

See footnotes at end of table.

**Table 24. Percentage of Total Deliveries Represented by Onsystem Sales, by State, 1995-1997 — Continued**

State	1997							
	April		March		February		January	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama .....	59.3	17.3	76.2	17.9	79.7	19.5	77.7	17.7
Alaska .....	65.8	98.8	59.4	98.6	71.1	97.9	69.5	97.1
Arizona .....	83.8	21.2	86.5	22.8	87.8	24.7	87.4	19.9
Arkansas .....	93.5	10.9	94.9	12.1	96.6	13.6	96.1	12.9
California .....	51.6	10.6	54.5	11.0	58.5	11.3	58.0	11.3
Colorado .....	95.0	25.2	NA	NA	NA	NA	NA	NA
Connecticut .....	87.1	68.2	87.0	68.2	90.2	78.8	90.1	76.0
Delaware .....	100.0	35.6	100.0	32.7	100.0	34.0	100.0	28.8
District of Columbia .....	100.0	—	59.9	—	62.8	—	67.9	—
Florida .....	97.8	7.0	97.0	6.7	96.6	8.0	96.1	8.2
Georgia .....	87.2	15.9	88.9	15.7	92.7	21.1	93.7	20.0
Hawaii .....	100.0	—	100.0	—	100.0	—	100.0	—
Idaho .....	86.1	2.1	87.8	2.1	89.7	2.2	87.8	1.9
Illinois .....	53.1	8.4	54.4	10.3	54.3	9.8	62.0	14.6
Indiana .....	82.1	10.6	86.5	12.7	93.0	19.8	93.7	20.1
Iowa .....	90.3	7.2	88.5	7.4	89.4	7.2	90.3	9.6
Kansas .....	66.1	12.6	60.1	11.4	65.7	13.2	86.2	8.2
Kentucky .....	88.2	14.9	89.6	15.5	90.8	19.4	91.9	22.1
Louisiana .....	98.1	7.4	71.7	10.5	98.4	8.6	88.0	9.5
Maine .....	100.0	91.3	100.0	91.8	100.0	100.0	100.0	100.0
Maryland .....	<sup>R</sup> 76.8	<sup>R</sup> 1.6	79.8	<sup>R</sup> 17.3	<sup>R</sup> 82.8	NA	84.5	<sup>R</sup> 2.8
Massachusetts .....	72.2	38.5	70.9	34.4	67.3	36.8	67.3	48.6
Michigan .....	65.3	10.4	66.4	12.8	69.4	14.2	69.2	14.0
Minnesota .....	98.0	42.6	99.0	47.3	98.7	45.5	98.6	37.1
Mississippi .....	92.4	35.4	95.8	36.5	96.3	37.6	96.9	38.4
Missouri .....	80.7	16.7	83.9	27.3	79.9	19.5	86.3	28.3
Montana .....	91.1	4.5	90.4	4.1	93.0	4.1	90.9	4.4
Nebraska .....	<sup>R</sup> 72.3	19.0	70.8	21.8	92.8	27.0	77.6	28.9
Nevada .....	69.2	8.0	78.1	7.3	79.7	15.2	77.2	8.3
New Hampshire .....	92.0	62.3	94.0	53.6	99.1	52.1	98.8	44.2
New Jersey .....	64.0	36.9	68.5	30.3	93.5	36.0	70.6	35.9
New Mexico .....	58.1	2.8	70.5	3.9	72.5	2.1	74.0	19.4
New York .....	NA	NA	NA	NA	NA	NA	NA	NA
North Carolina .....	87.5	22.4	91.6	30.2	95.9	39.6	100.0	90.1
North Dakota .....	91.9	39.4	91.4	59.4	93.9	49.5	93.4	43.3
Ohio .....	64.8	3.3	69.2	5.5	68.5	5.6	72.5	8.4
Oklahoma .....	86.3	3.7	88.1	5.9	90.5	8.7	90.7	7.4
Oregon .....	98.5	19.3	98.8	19.6	98.9	20.2	98.8	17.0
Pennsylvania .....	64.7	14.1	64.3	15.4	69.8	14.9	69.3	18.9
Rhode Island .....	88.5	55.8	82.2	61.7	91.7	45.9	89.6	38.1
South Carolina .....	95.8	77.7	97.4	80.3	98.2	78.2	100.0	86.8
South Dakota .....	85.7	22.6	86.3	26.7	85.7	30.4	86.9	31.4
Tennessee .....	90.4	28.1	NA	NA	92.5	28.7	94.0	35.9
Texas .....	59.2	20.1	66.7	17.3	67.8	17.1	65.4	19.2
Utah .....	83.8	9.2	83.0	6.7	87.2	10.8	86.2	10.2
Vermont .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia .....	72.6	12.2	77.0	13.2	81.6	6.8	87.5	15.5
Washington .....	83.1	26.8	86.0	27.3	86.7	26.8	87.8	26.7
West Virginia .....	49.6	7.1	60.3	19.7	67.8	14.8	67.8	14.4
Wisconsin .....	NA	NA	94.2	28.6	93.4	31.0	94.5	31.7
Wyoming .....	<sup>R</sup> 62.1	<sup>R</sup> 1.9	<sup>R</sup> 74.0	<sup>R</sup> 1.8	<sup>R</sup> 82.1	<sup>R</sup> 1.9	<sup>R</sup> 85.0	<sup>R</sup> 1.5
<b>Total .....</b>	<sup>R</sup> 66.5	16.0	<sup>R</sup> 68.8	16.3	72.2	16.7	72.6	<sup>R</sup> 18.4

See footnotes at end of table.



**Table 24. Percentage of Total Deliveries Represented by Onsystem Sales, by State, 1995-1997 — Continued**

State	1996							
	Total		December		November		October	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama .....	81.1	22.6	80.7	22.4	73.2	22.6	71.2	20.4
Alaska .....	63.4	64.3	61.8	68.0	58.2	71.3	54.2	64.8
Arizona .....	85.2	19.7	84.1	19.9	84.1	18.2	83.2	16.8
Arkansas .....	95.0	13.3	95.7	13.8	94.1	13.6	90.2	13.6
California .....	54.9	11.2	56.1	9.9	57.9	10.8	44.1	9.3
Colorado .....	93.2	7.4	94.3	7.1	92.8	8.3	89.1	9.7
Connecticut .....	87.0	84.6	87.9	80.1	84.0	74.8	81.3	71.9
Delaware .....	100.0	37.3	100.0	30.8	100.0	32.5	100.0	30.7
District of Columbia .....	70.5	—	65.3	—	55.1	—	48.0	—
Florida .....	97.1	13.4	96.1	12.5	97.0	11.1	97.4	12.2
Georgia .....	94.1	32.2	93.2	31.6	92.2	26.7	90.6	28.9
Hawaii .....	100.0	—	100.0	—	100.0	—	100.0	—
Idaho .....	86.6	1.4	87.6	2.6	84.9	0.5	77.3	1.7
Illinois .....	53.9	13.7	56.1	22.5	53.0	13.7	48.8	8.6
Indiana .....	96.3	16.6	97.4	21.4	96.1	16.3	91.5	11.7
Iowa .....	87.7	9.0	87.2	11.7	86.6	18.4	81.8	9.8
Kansas .....	71.7	7.7	71.6	8.3	82.4	6.9	70.0	9.2
Kentucky .....	90.8	27.1	91.9	24.1	88.9	21.5	88.9	20.9
Louisiana .....	98.3	10.6	98.0	11.3	98.3	NA	98.6	NA
Maine .....	100.0	91.0	100.0	90.2	100.0	91.5	100.0	91.3
Maryland .....	91.9	11.7	93.2	19.7	92.2	2.1	87.3	3.7
Massachusetts .....	74.7	41.9	68.9	33.8	62.5	45.3	69.5	39.6
Michigan .....	66.9	12.5	70.2	15.8	67.2	12.7	55.8	8.1
Minnesota .....	96.2	41.3	95.6	44.5	94.8	44.1	92.4	41.2
Mississippi .....	97.4	41.7	96.9	44.1	96.7	44.8	96.0	39.1
Missouri .....	82.2	24.7	84.6	33.1	78.6	27.7	69.3	17.0
Montana .....	91.5	3.4	92.7	4.3	91.6	4.4	87.5	2.8
Nebraska .....	70.0	20.4	76.6	23.5	68.6	23.3	40.3	15.2
Nevada .....	74.2	7.2	74.9	7.8	70.8	7.4	64.0	5.2
New Hampshire .....	96.9	55.4	96.1	45.4	93.6	59.3	94.3	53.7
New Jersey .....	73.3	53.6	70.2	35.5	69.4	52.7	67.2	48.2
New Mexico .....	64.7	3.5	71.8	13.3	68.5	4.8	63.5	2.6
New York .....	77.0	14.7	NA	13.1	NA	11.4	NA	11.3
North Carolina .....	96.5	59.4	99.0	91.6	92.0	49.7	85.7	26.7
North Dakota .....	88.0	26.5	91.0	43.9	89.7	49.6	79.9	36.2
Ohio .....	71.8	7.4	74.0	10.0	72.4	7.8	68.5	3.7
Oklahoma .....	84.5	6.6	87.6	7.1	82.1	7.6	73.0	4.7
Oregon .....	98.3	18.0	98.6	16.0	98.3	14.4	97.0	14.1
Pennsylvania .....	70.4	18.5	61.0	22.3	63.3	16.6	59.7	13.5
Rhode Island .....	91.8	16.9	89.1	12.4	87.3	17.4	66.5	18.3
South Carolina .....	99.0	85.8	100.0	89.3	97.4	85.8	96.4	83.4
South Dakota .....	82.7	24.6	82.8	23.5	80.6	24.2	72.9	10.4
Tennessee .....	94.3	47.0	95.3	42.8	92.8	40.6	87.3	45.0
Texas .....	83.5	20.2	87.1	17.5	84.2	16.5	NA	20.2
Utah .....	81.9	9.0	84.4	9.7	81.2	9.3	79.5	9.4
Vermont .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia .....	85.3	18.0	88.1	22.1	84.8	21.4	74.3	11.1
Washington .....	85.9	24.4	87.4	27.2	84.6	22.2	82.7	19.8
West Virginia .....	56.3	14.3	71.3	14.4	54.5	14.8	43.4	13.3
Wisconsin .....	91.6	36.4	91.8	34.5	90.9	34.6	87.1	29.9
Wyoming .....	85.9	2.9	69.0	3.1	81.1	0.8	70.5	0.9
<b>Total .....</b>	<b>77.6</b>	<b>20.2</b>	<b>78.4</b>	<b>20.7</b>	<b>76.1</b>	<b>19.0</b>	<b>68.8</b>	<b>18.1</b>

See footnotes at end of table.

**Table 24. Percentage of Total Deliveries Represented by Onsystem Sales, by State, 1995-1997 — Continued**

State	1996							
	September		August		July		June	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama .....	73.1	20.8	72.5	19.6	73.7	20.6	75.4	20.9
Alaska .....	50.7	67.0	53.1	60.9	51.2	55.0	55.0	59.6
Arizona .....	83.5	16.7	78.5	18.0	82.1	17.2	83.6	18.5
Arkansas .....	92.7	11.3	91.6	10.9	88.5	11.0	94.2	11.7
California .....	45.3	9.9	44.7	9.0	48.4	10.4	53.5	10.4
Colorado .....	90.6	9.2	87.1	8.3	88.0	9.0	92.5	6.9
Connecticut .....	68.9	71.2	77.6	78.0	81.1	80.3	78.9	89.3
Delaware .....	100.0	27.6	100.0	26.2	100.0	26.2	100.0	38.3
District of Columbia .....	46.9	—	52.1	—	56.4	—	70.5	—
Florida .....	97.6	10.1	97.2	11.0	97.5	11.5	97.6	12.6
Georgia .....	86.6	35.0	88.1	28.5	88.7	18.9	89.0	23.9
Hawaii .....	100.0	—	100.0	—	100.0	—	100.0	—
Idaho .....	80.0	1.3	81.9	1.8	82.4	1.1	86.0	1.8
Illinois .....	43.2	6.4	43.0	5.8	39.6	5.7	44.1	5.1
Indiana .....	86.8	9.2	86.8	9.4	91.6	10.2	88.9	5.0
Iowa .....	77.0	5.6	92.2	8.3	77.2	4.9	86.6	5.4
Kansas .....	72.8	9.4	38.0	7.3	47.5	8.4	57.7	4.7
Kentucky .....	84.3	18.6	85.4	18.1	85.9	25.6	91.1	16.8
Louisiana .....	98.9	10.2	97.5	12.1	99.2	11.1	98.6	10.8
Maine .....	100.0	89.1	100.0	88.0	100.0	88.7	100.0	89.8
Maryland .....	87.0	1.6	85.0	3.7	81.4	6.3	86.8	8.4
Massachusetts .....	55.4	34.6	61.3	39.6	68.1	41.7	71.3	44.1
Michigan .....	44.6	5.5	41.3	6.0	44.2	5.8	46.1	7.2
Minnesota .....	90.3	35.8	95.8	38.6	94.4	38.6	95.4	38.3
Mississippi .....	97.2	40.0	97.9	41.5	97.4	38.3	96.9	40.4
Missouri .....	67.3	18.2	58.1	13.2	62.0	19.4	72.3	23.7
Montana .....	86.1	2.1	87.2	1.4	87.8	1.7	90.8	1.8
Nebraska .....	66.2	17.0	54.1	17.2	51.8	17.8	66.0	14.9
Nevada .....	67.6	5.3	66.7	5.6	69.2	5.8	73.0	6.6
New Hampshire .....	96.0	53.7	94.8	51.4	93.7	52.7	95.6	56.1
New Jersey .....	61.8	53.2	60.0	57.8	62.0	57.4	66.3	48.9
New Mexico .....	61.3	2.0	62.2	3.8	65.7	1.9	65.0	3.8
New York .....	NA	12.5	NA	12.9	NA	11.9	NA	13.3
North Carolina .....	86.1	24.7	88.5	34.7	96.0	64.5	90.7	48.1
North Dakota .....	69.1	21.1	74.5	8.7	77.2	9.1	77.2	8.2
Ohio .....	65.1	4.3	53.9	3.6	56.4	2.9	42.1	3.8
Oklahoma .....	72.7	4.8	69.0	5.4	72.2	4.8	75.5	4.9
Oregon .....	97.6	14.2	98.0	13.6	98.1	13.6	98.3	16.3
Pennsylvania .....	66.3	13.8	66.2	14.8	64.9	15.6	62.7	13.9
Rhode Island .....	49.9	13.2	86.8	14.5	84.1	10.9	92.0	18.1
South Carolina .....	97.3	84.5	97.3	84.7	100.0	90.0	96.9	81.8
South Dakota .....	69.4	7.9	66.9	8.8	67.1	9.9	74.5	7.7
Tennessee .....	80.8	36.2	88.4	40.4	94.5	50.0	90.9	49.1
Texas .....	77.9	19.4	81.1	21.8	82.0	23.1	80.0	20.7
Utah .....	78.4	8.3	71.9	7.5	73.3	7.2	72.9	9.2
Vermont .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia .....	65.5	11.9	74.0	10.2	68.8	11.2	66.9	14.7
Washington .....	81.5	20.4	80.1	12.0	80.0	21.7	82.0	22.4
West Virginia .....	34.7	12.0	44.4	13.1	43.9	13.0	27.1	12.6
Wisconsin .....	82.4	26.6	83.8	26.0	82.1	26.3	86.1	26.7
Wyoming .....	98.7	4.0	98.3	4.0	99.6	3.2	96.2	3.7
<b>Total .....</b>	<b>66.9</b>	<b>17.6</b>	<b>65.9</b>	<b>18.1</b>	<b>67.3</b>	<b>19.1</b>	<b>69.3</b>	<b>17.6</b>

See footnotes at end of table.

**Table 24. Percentage of Total Deliveries Represented by Onsystem Sales, by State, 1995-1997 — Continued**

State	1996							
	May		April		March		February	
	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial	Commercial	Industrial
Alabama .....	80.2	23.1	83.8	24.0	84.1	24.0	88.1	28.5
Alaska .....	59.1	69.5	62.5	64.3	76.0	65.6	78.9	70.5
Arizona .....	84.8	26.0	83.7	19.8	86.9	21.3	90.2	23.9
Arkansas .....	92.4	13.0	96.3	14.1	95.6	13.9	97.0	15.9
California .....	52.6	11.6	64.1	12.6	63.7	12.7	59.6	15.6
Colorado .....	92.4	6.2	93.1	6.0	93.8	5.5	95.5	5.9
Connecticut .....	78.5	91.9	89.8	93.9	93.1	96.2	93.1	97.9
Delaware .....	100.0	31.7	100.0	28.5	100.0	57.0	100.0	57.7
District of Columbia .....	70.4	—	85.4	—	83.0	—	83.3	—
Florida .....	97.8	14.8	97.6	15.8	96.7	15.7	96.9	16.0
Georgia .....	92.2	31.7	94.9	35.5	96.9	39.5	98.1	42.7
Hawaii .....	100.0	—	100.0	—	100.0	—	100.0	—
Idaho .....	85.7	1.4	87.2	1.4	88.2	1.5	90.1	1.3
Illinois .....	49.7	9.3	51.7	14.8	57.8	19.6	58.3	19.4
Indiana .....	93.7	30.3	97.4	20.0	97.9	24.5	98.6	26.0
Iowa .....	85.9	5.6	85.8	7.4	88.3	8.2	92.0	8.1
Kansas .....	56.3	9.2	68.5	7.5	77.1	8.9	85.9	7.1
Kentucky .....	84.0	23.2	90.3	33.2	92.1	38.3	92.0	38.8
Louisiana .....	97.5	9.9	99.0	10.9	97.7	9.6	98.4	10.5
Maine .....	100.0	90.1	100.0	86.5	100.0	87.1	100.0	100.0
Maryland .....	86.2	11.1	92.4	18.2	93.7	22.6	96.5	19.8
Massachusetts .....	79.2	40.7	80.2	48.2	82.4	42.1	83.5	45.7
Michigan .....	64.4	10.2	68.5	15.1	73.1	15.7	72.1	18.2
Minnesota .....	97.3	38.5	97.6	50.2	97.2	43.2	97.8	42.8
Mississippi .....	97.4	40.7	97.3	41.8	97.0	43.1	98.1	43.8
Missouri .....	78.7	24.7	84.6	26.2	85.6	24.5	89.9	33.6
Montana .....	90.8	2.7	92.6	3.8	91.9	4.8	93.7	5.5
Nebraska .....	69.8	19.0	77.3	20.6	77.7	22.5	79.1	24.7
Nevada .....	74.2	6.5	76.4	8.3	78.2	8.5	80.5	9.7
New Hampshire .....	98.1	61.9	98.0	58.5	98.3	55.2	98.3	56.0
New Jersey .....	68.8	59.0	73.5	58.4	78.9	64.4	80.5	58.3
New Mexico .....	46.3	3.5	58.5	2.1	60.4	0.6	62.6	0.5
New York .....	NA	14.1	NA	15.5	NA	21.2	NA	19.1
North Carolina .....	91.4	40.2	99.7	79.4	99.9	92.1	99.8	74.2
North Dakota .....	85.1	17.8	88.7	22.4	90.5	18.1	92.1	22.2
Ohio .....	63.1	5.8	72.3	8.0	76.1	9.7	76.1	12.9
Oklahoma .....	78.5	3.1	88.2	8.3	87.0	8.6	89.4	10.8
Oregon .....	98.2	18.1	98.1	23.7	98.6	25.4	98.8	26.6
Pennsylvania .....	67.9	15.7	71.6	18.2	76.7	26.0	77.5	23.5
Rhode Island .....	97.8	21.5	98.2	19.7	98.4	61.9	99.3	46.9
South Carolina .....	97.5	82.9	100.0	89.3	100.0	87.0	100.0	85.1
South Dakota .....	78.7	12.2	85.0	17.1	84.7	60.7	87.9	31.6
Tennessee .....	92.6	44.4	96.9	57.0	93.9	56.6	97.7	51.3
Texas .....	81.5	20.0	84.5	18.6	82.2	20.4	89.5	22.5
Utah .....	77.7	8.8	82.3	9.9	82.8	9.2	85.6	9.7
Vermont .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Virginia .....	78.5	22.2	84.3	21.7	90.9	19.5	95.1	21.6
Washington .....	84.4	23.8	84.4	26.6	87.6	32.0	89.8	31.9
West Virginia .....	45.3	12.9	53.9	13.2	63.0	15.1	64.6	17.1
Wisconsin .....	89.9	35.7	92.0	38.4	94.0	50.3	94.8	45.8
Wyoming .....	81.0	3.8	82.0	3.1	98.0	3.2	98.0	2.7
<b>Total</b> .....	<b>73.9</b>	<b>19.6</b>	<b>79.3</b>	<b>21.4</b>	<b>81.7</b>	<b>23.3</b>	<b>83.8</b>	<b>23.6</b>

<sup>R</sup> = Revised Data.

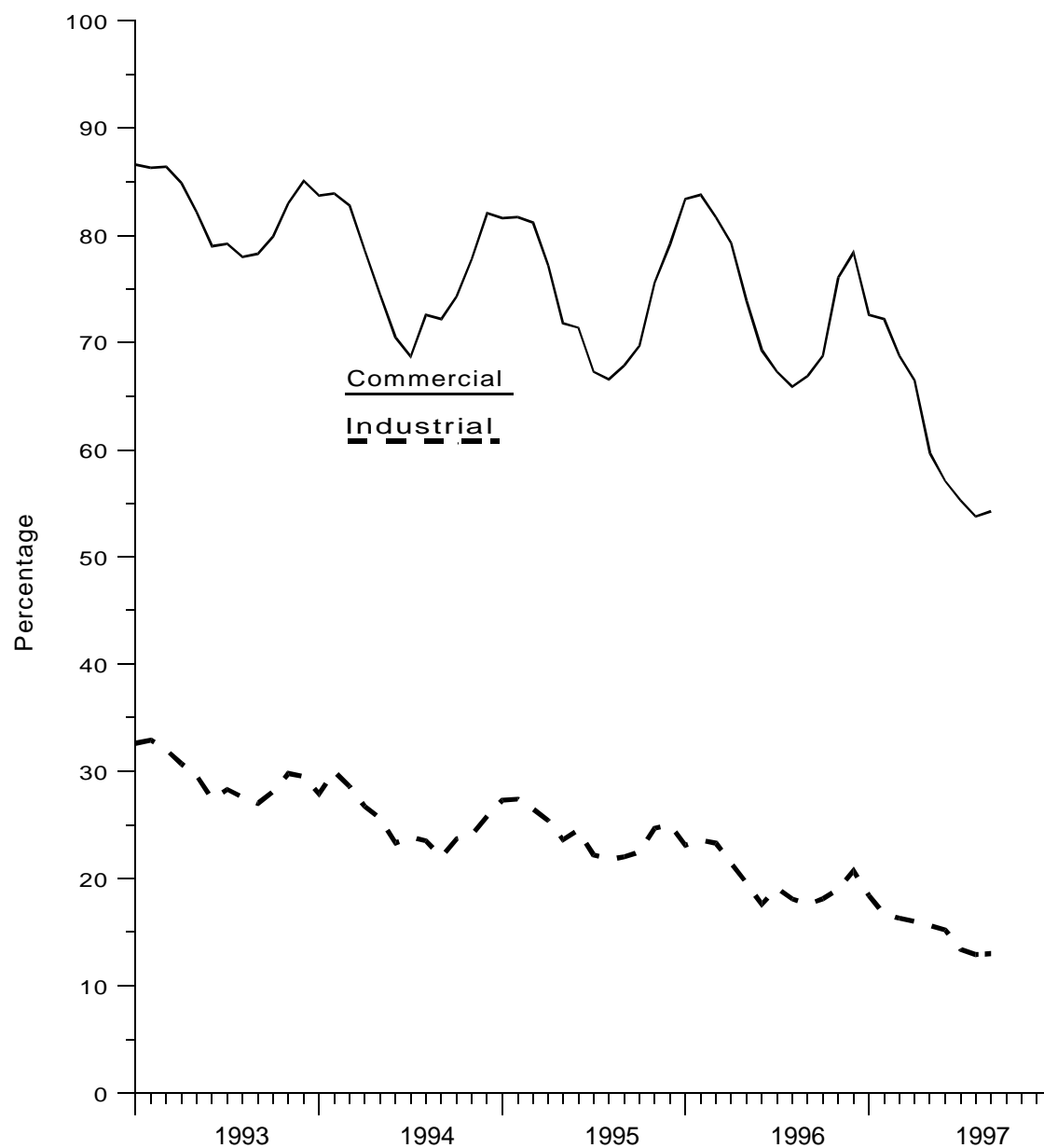
NA = Not Available.

— = Not Applicable.

Notes: Volumes of natural gas reported for the commercial and industrial sectors in this publication include data for both sales and deliveries for the account of others. This table shows the percent of the total State volume that represents natural gas sales to the commercial and industrial sectors. This information may be helpful in evaluating commercial and industrial price data which are based on sales data only. See Appendix C, Statistical Considerations, for a discussion of the computation of natural gas prices.

Source: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

Figure 6. Percentage of Total Deliveries Represented by Onsystem Sales, 1993-1997



Sources: Energy Information Administration, Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers" and Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

**Table 25. Gas Home Customer-Weighted Heating Degree Days**

Census Divisions	November 1 through November 30				
	Normal <sup>a</sup>	1996	1997	Percent Change	
				Normal to 1997	1996 to 1997
New England					
CT, ME, MA, NH, RI, VT .....	693	820	784	13.1	-4.4
Middle Atlantic					
NJ, NY, PA .....	646	775	729	12.8	-5.9
East North Central					
IL, IN, MI, OH, WI .....	730	917	829	13.6	-9.6
West North Central					
IA, KS, MN, MO, ND, NE, SD .....	788	982	892	13.2	-9.2
South Atlantic					
DE, FL, GA, MD and DC, NC, SC, VA, WV .....	421	538	519	23.3	-3.5
East South Central					
AL, KY, MS, TN .....	431	524	546	26.7	4.2
West South Central					
AR, LA, OK, TX .....	280	291	359	28.2	23.4
Mountain					
AZ, CO, ID, MT, NV, NM, UT, WY .....	715	711	737	3.1	3.7
Pacific <sup>b</sup>					
CA, OR, WA .....	341	320	276	-19.1	-13.8
U.S. Average <sup>b</sup> .....	559	657	621	11.1	-5.5

<sup>a</sup> Normal is based on calculations of data from 1961 through 1990.

<sup>b</sup> Excludes Alaska and Hawaii.

Note: See Appendix A, Explanatory Note 10 for discussion of Heating Degree-Days computations.

Sources: National Oceanic and Atmospheric Administration.

## Appendix A

### Explanatory Notes

The Energy Information Administration (EIA) publishes monthly data for the supply and disposition of natural gas in the United States in the *Natural Gas Monthly* (NGM). The information in this Appendix is provided to assist users in evaluating the monthly data. There is a brief description of what data are estimated and what data are taken from submitted reports, followed by ten technical notes that provide important information for individual data series.

The monthly data are preliminary when initially published. Data shown in this report for the most current months are taken from the EIA Short-Term Integrated Forecasting System (STIFS) model computations. Each month, EIA staff review the STIFS model estimates and adjust them, if necessary, based on their knowledge of new developments in the natural gas industry. Data for prior months are estimated or taken from submitted reports.

**Table A1. Methodology for Reporting Initial Monthly Natural Gas Supply and Disposition Data**

Components	Reporting Methodology
<b>Supply and Disposition</b>	
Marketed Production	Reported on Form EIA-895 and Estimated from Historical Data
Extraction Loss	Derived from Marketed Production
Dry Production	Marketed Production minus Extraction Loss
Withdrawals from Storage	Reported on Form EIA-191
Supplemental Gaseous Fuels	Derived from Supply Estimates and Coal Gasification Information
Imports	Estimated from National Energy Board of Canada Information and Liquefied Natural Gas Information
Additions to Storage	Reported on Form EIA-191
Exports	Estimated from Industry Trends and Liquefied Natural Gas Information
Current-Month Consumption	Estimated from Historical Month-to-Month Percent Changes
<b>Consumption by Sector</b>	
Lease and Plant Fuel	Derived from Marketed Production
Pipeline Fuel	Derived from Estimates for Lease and Plant Fuel and Deliveries to Consumers
Residential	Estimated from Reports to the Sample Survey Form EIA-857
Commercial	Estimated from Reports to the Sample Survey Form EIA-857
Industrial	Estimated from Reports to the Sample Survey Form EIA-857
Electric Utilities	Reported on Form EIA-759

For data that are not taken from STIFS computations, Table A1 below lists the methodologies for deriving the monthly data to be published.

The STIFS model contains a series of calculations that produce forecasts for all of the energy industry. It is driven primarily by three sets of inputs or assumptions: estimates of key macroeconomic variables, world oil price assumptions, and assumptions about the severity of weather. The natural gas estimates also reflect other key inputs or assumptions including gas wellhead prices, electric power generation by other energy sources, and U.S. gas import capacity. The macroeconomic variable estimates are produced by DRI/McGraw-Hill but are adjusted by EIA to reflect EIA assumptions about the world price of oil, energy product prices, and other assumptions which may affect the macroeconomic outlook. The EIA publishes forecasts for the energy industry each quarter in the *Short-Term Energy Outlook*.

For production, total supply and disposition, and storage data (Tables 1, 2, and 9), the most current two months shown are estimates produced from STIFS computations, and data that are two months or more prior to the date of publication are estimated or taken from submitted reports. For example, in the March issue of the NGM, February and March data are taken from the STIFS model computations while January and prior months data are estimated from available data sources or reported directly on EIA forms. For consumption data by sector (Table 3), the most current three months shown are estimates produced from STIFS computations while data that are three months prior to date of publication are taken from EIA forms.

## **Note 1. Nonhydrocarbon Gases Removed**

### ***Annual Data***

Data on nonhydrocarbon gases removed from marketed production—carbon dioxide, helium, hydrogen sulfide, and nitrogen—are reported by State agencies on the voluntary Form EIA-895. For 1995, of the 33 producing States, 22 reported data on nonhydrocarbon gases removed. The 22 States accounted for 60 percent of total 1995 gross withdrawals. Of the 22 States reporting nonhydrocarbon gases removed, 11 reported zero values: Alaska, Arizona, Arkansas, Colorado, Illinois, Maryland, Missouri, Nevada, New York, South Dakota, and Virginia. The ten States reporting

volumes greater than zero are Alabama, California, Florida, Kentucky, Mississippi, Nebraska, New Mexico, North Dakota, Texas, and Wyoming. In addition, Kansas, Louisiana, Montana, and Oklahoma, which together accounted for 40 percent of gross withdrawals, did not report nonhydrocarbon gases removed separately. However, their gross withdrawal data excluded all or most of the nonhydrocarbon gases removed on leases. No estimates are made for States not reporting nonhydrocarbon gases removed.

### ***Preliminary Monthly Data***

All monthly data are considered preliminary until after publication of the *Natural Gas Annual* for the year in which the report month falls. Seven States report monthly data on nonhydrocarbon gases removed: Alabama, Arizona, Mississippi, New Mexico, North Dakota, Oregon and Texas. Monthly data for California, Colorado, Florida, and Wyoming are estimated based on annual data reported on Form EIA-895. Nonhydrocarbon gases as an annual percentage of gross withdrawals reported by each of the six States is applied to each State's monthly gross withdrawal data to produce an estimate of nonhydrocarbon gases removed.

### ***Final Monthly Data***

Beginning with report year 1990, States filing the Form EIA-627, "Annual Quantity and Value of Natural Gas Report," were asked to supply monthly breakdowns of all data previously reported on an annual basis. The sums of the reported figures were used to calculate monthly volumes. In 1997 the Form EIA-627 was discontinued. States were requested to file an annual schedule on the monthly Form EIA-895, "Monthly Quantity and Value of Natural Gas Report."

For States not supplying monthly data on the annual schedule of the EIA-895, final monthly data are calculated by proportionally allocating the differences between total annual data reported on the Form EIA-895 and the sum of monthly data (January-December).

## **Note 2. Supplemental Gaseous Fuels**

### ***Annual Data***

Annual data are published from Form EIA-176.

### ***Preliminary Monthly Data***

All monthly data are considered preliminary until after the publication of the *Natural Gas Annual* for the year in which the report month falls. Monthly estimates are based on the annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. This ratio is applied to the monthly sum of these three elements to compute a monthly supplemental gaseous fuels figure.

### ***Final Monthly Data***

Monthly data are revised after publication of the *Natural Gas Annual*. Final monthly data are estimated based on the revised annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. This ratio is applied to the revised monthly sum of these three elements to compute final monthly data.

## **Note 3. Production**

### ***Annual Data***

Natural gas production data are collected from 33 gas-producing States on Form EIA-895 which includes gross withdrawals, vented and flared, repressuring, nonhydrocarbon gases removed, fuel used on leases, marketed production (wet), and extraction loss. The U.S. Minerals Management Service (MMS) also supplies data on the quantity and value of natural gas production on the Gulf of Mexico and Outer Continental Shelf. No adjustments are made to the data.

### ***Estimated Monthly Data***

State marketed production data for a particular month are estimated if data are unavailable at the time of publication. The data are estimated based on final monthly data reported on the Form EIA-895 for the previous year.

Estimates for total U.S. marketed production are based on final monthly data reported on the Form EIA-895 for the previous year. State estimates for nonhydrocarbon gas removed, gas used for repressuring,

and gas vented and flared are based on the ratio of the item to gross withdrawals as reported on the EIA-895. These ratios are applied to the month's estimates for gross withdrawals to calculate figures for nonhydrocarbon gases removed, gas used for repressuring, and gas vented and flared. Estimates for gross withdrawal data are calculated from final monthly data filed on Form EIA-895 for the previous year.

### ***Preliminary Monthly Data***

All monthly data are considered preliminary until after publication of the *Natural Gas Annual* for the year in which the report month falls. Preliminary monthly data are published from reports from the Form EIA-895 and the MMS. Volumetric data are converted, as necessary, to a standard 14.73 psia pressure base. Data are revised as Table 7 monthly data are updated.

### ***Final Monthly Data***

Final monthly data for 1993, 1994, and 1995 are the sums of monthly data reported on the annual Form EIA-627, "Annual Quantity and Value of Natural Gas Report." For prior years, the differences between each State's annual production data reported on the EIA-627 and the sum of its monthly IOGCC reports for the year were allocated proportionally to the monthly IOGCC data.

## **Note 4. Imports and Exports**

### ***Annual Data and Final Monthly Data***

Annual and final monthly data are published from the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*, which requires data to be reported each quarter by month for the calendar year.

### ***Preliminary Monthly Data - Imports***

Preliminary monthly import data are based on data from the National Energy Board of Canada and responses to informal industry contacts and EIA estimates. Preliminary data are revised after the publication of the article "U.S. Imports and Exports of Natural Gas" for the calendar year.



## ***Preliminary Monthly Data - Exports***

Preliminary monthly export data are based on historical data from the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*, informal industry contacts, and information gathered from natural gas industry trade publications. Preliminary monthly data are revised after publication of "U.S. Imports and Exports of Natural Gas" for the calendar year in which the report month falls.

## **Note 5. Consumption**

### ***All Annual Data***

All consumption data except electric utility data are from the Form EIA-857 and Form EIA-176. No adjustments are made to the data. Electric utility data are reported on Form EIA-759.

### ***Monthly Data***

All monthly data are considered preliminary until after publication of the *Natural Gas Annual*.

### ***Total Consumption***

#### **Preliminary Monthly Data**

The most current month estimate is calculated based on the arithmetic average change from the previous month for the previous 3 years. The following month this estimate is revised by summing the components (pipeline fuel, lease and plant fuel, and deliveries to consumers).

#### **Final Monthly Data**

Monthly data are revised after publication of the *Natural Gas Annual*. Final monthly total consumption is obtained by summing its components.

### ***Residential, Commercial, and Industrial Sector Consumption***

#### **Preliminary Monthly Data**

Preliminary monthly residential, commercial, and industrial data are from Form EIA-857. See Appendix C, "Statistical Considerations," for a detailed explanation of sample selection and estimation procedures.

## **Average Price of Deliveries to Consumers**

Price data are representative of prices for gas sold and delivered to residential, commercial, and industrial consumers. These prices do not reflect average prices of natural gas transported to consumers for the account of third parties or "spot-market" prices.

### **Final Monthly Data**

Monthly data are revised after the publication of the *Natural Gas Annual*. Final monthly data are estimated by allocating annual consumption data from the Form EIA-176 to each month in proportion to monthly volumes reported in Form EIA-857.

### ***Agricultural Use***

Beginning with the reporting of 1996 annual data, the EIA changed the customer category used for reporting deliveries to consumers in the agricultural industry from commercial to industrial. In 1995 and earlier years, consumption of natural gas for agricultural use was classified as commercial use. Separate reports of the volumes affected are not available so the direct impact of this change is not known. Most natural gas consumed in agriculture is used to drive irrigation systems and to dry crops.

For the reporting of monthly data, the customer category will not be changed until 1998. In 1996, the monthly data reported under the old classification were adjusted to the annual data reported under the new classification. Monthly 1997 data will be adjusted in the same way as the 1996 data.

In comparing sectoral use over time, note that:

- There is an inherent shift in natural gas volumes from the commercial to industrial sectors due simply to changes in the reporting requirements. This break in series may indicate a spurious increase in industrial consumption with a corresponding decrease in the commercial sector.
- The sum of natural gas volumes consumed by the commercial and industrial sectors will not be changed by this modification of the instructions.

### ***Electric Utility Sector Consumption***

#### **All Monthly Data**

Monthly data published are from Form EIA-759.

## ***Pipeline Fuel Consumption***

### **Preliminary Monthly Data**

Preliminary data are estimated based on the pipeline fuel consumption as an annual percentage of total consumption from the previous year's Form EIA-176. This percentage is applied to each month's total consumption figure to compute the monthly estimate.

### **Final Monthly Data**

Monthly data are revised after the publication of the *Natural Gas Annual*. Final monthly data are based on the revised annual ratio of pipeline fuel consumption to total consumption from the Form EIA-176. This ratio is applied to each month's revised total consumption figure to compute final monthly pipeline fuel consumption estimates.

## ***Lease and Plant Fuel Consumption***

### **Preliminary Monthly Data**

Preliminary monthly data are estimated based on lease and plant fuel consumption as an annual percentage of marketed production. This percentage is applied to each month's marketed production figure to compute estimated lease and plant fuel consumption.

### **Final Monthly Data**

Monthly data are revised after publication of the *Natural Gas Annual*. Final monthly plant fuel data are based on a revised annual ratio of lease and plant fuel consumption to marketed production from Form EIA-176. This ratio is applied to each month's revised marketed production figure to compute final monthly plant fuel consumption estimates. Final monthly lease data are collected on the Form EIA-627 and estimates from the Form EIA-176. See the *Natural Gas Annual* for a complete discussion of this process.

## **Note 6. Extraction Loss**

### ***Annual Data***

Extraction loss data are calculated from filings of Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." For a fuller discussion, see the *Natural Gas Annual*.

## ***Preliminary Monthly Data***

Preliminary data are estimated based on extraction loss as an annual percentage of marketed production. This percentage is applied to each month's marketed production to estimate monthly extraction loss.

### ***Final Monthly Data***

Monthly data are revised after the publication of the *Natural Gas Annual*. Final monthly data are estimated by allocating annual extraction loss data to each month based on its total natural gas marketed production.

## **Note 7. Natural Gas Storage**

### ***Underground Natural Gas Storage***

All monthly data concerning underground storage are published from the EIA-191. A new EIA-191 became effective in January 1994. Injection and withdrawal data from the EIA-191 survey are adjusted to correspond to data from Form EIA-176 following publication of the *Natural Gas Annual*.

### ***Underground and Liquefied Natural Gas Storage***

The final monthly and annual storage and withdrawal data for 1991 through 1995 shown in Table 2 include both underground and liquefied natural gas (LNG) storage. Underground storage data are obtained from the EIA-191 and EIA-176 surveys in the manner described earlier. Annual data on LNG additions and withdrawals are taken from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying it to annual LNG data.

## **Note 8. Average Wellhead Value**

### ***Annual Data***

Form EIA-895 requests State agencies to report the quantity and value of marketed production. When complete data are unavailable, the form instructs the State agency to report the available value and the quan-

tity of marketed production associated with this value. A number of States reported volumes of production and associated values for other than marketed production. In addition, information for several States which were unable to provide data was obtained from Form EIA-176. It should be noted that Form EIA-176 reports a fraction of State production. The imputed value of marketed production in each State is calculated by dividing the State's reported value by its associated production. This unit price is then applied to the quantity of the State's marketed production to derive the imputed value of marketed production.

### ***Preliminary Monthly Data***

A preliminary estimate of the U.S. gas price is made each month based on the change in the production-weighted gas price from five States: Kansas, Mississippi, New Mexico, Oklahoma, and Texas. Gas prices for these five States are used because both their gas production and value represent a substantial sample of the U.S. gas production and value (roughly 50 percent), and their prices are readily available and provide a consistent series. The latest preliminary U.S. gas price estimate is calculated by multiplying the preliminary U.S. gas price estimate for the prior month by the ratio of the five States' gas price for the latest month to that of the prior month. This estimate replaces the initial gas price estimate.

### ***Final Monthly Data***

Preliminary monthly gas price data for Kansas, Mississippi, New Mexico, Oklahoma, and Texas are replaced by final monthly data that are adjusted to match the annual prices published in the *Natural Gas Annual* for each State. A revised set of the monthly U.S. gas price estimates are derived based on the monthly change in the production-weighted prices for these five States and adjusted to match the U.S. gas price published in the *Natural Gas Annual*.

## **Note 9. Balancing Item**

The "balancing item" category represents the difference between the sum of the components of natural gas supply and the sum of the components of natural gas disposition. These differences may be due to quantities lost or to the effects of data reporting problems.

Reporting problems include differences due to the net result of conversions of flow data metered at varying temperatures and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycles and calendar periods; and imbalances resulting from the merger of data reporting systems, which vary in scope, format, definitions, and type of respondents.

### ***Annual Data***

Annual data are from the *Natural Gas Annual*. For an explanation of the methodology involved in calculating annual "balancing item" data, see the *Natural Gas Annual*.

### ***Preliminary Monthly Data***

Preliminary monthly data in the "balancing item" category are calculated by subtracting dry gas production, withdrawals from storage, supplemental gaseous fuels, and imports from total supply/disposition.

## **Note 10. Heating Degree-Days**

Degree-days are relative measurements of outdoor air temperature. Heating degree-days are deviations of the mean daily temperature below 65 degrees Fahrenheit. A weather station recording a mean daily temperature of 40 degrees Fahrenheit would report 25 heating degree-days. There are several degree-day data bases maintained by the National Oceanic and Atmospheric Administration. The information published in the *Natural Gas Monthly* is developed by the National Weather Service Climate Analysis Center, Camp Springs, Maryland.

The data are available weekly with monthly summaries and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at these weather stations is used to calculate Statewide degree-day averages weighted by gas home customers. The State figures are then aggregated into Census Divisions and into the national average.

## Appendix B

### Data Sources

The data in this publication are taken from survey reports authorized by the U.S. Department of Energy (DOE), Energy Information Administration (EIA) and by the Federal Energy Regulatory Commission (FERC). The EIA is the independent statistical and analytical agency within the DOE. The FERC is an independent regulatory commission within the DOE which has jurisdiction primarily in the regulation of electric utilities and the interstate natural gas industry. The EIA conducts and processes some of the surveys authorized by the FERC. Data are collected from two annual surveys and four monthly surveys.

The annual reports are the Form EIA-176, a mandatory survey of all companies that deliver natural gas to consumers or that transport gas across State lines, and the Form EIA-627, a voluntary survey completed by energy or conservation agencies in the gas-producing States.

The monthly reports include two surveys of the natural gas industry and two surveys of the electric utility industry. The natural gas industry survey is the Form EIA-191 filed by companies that operate underground storage facilities, and the Form EIA-857 filed by a sample of companies that deliver natural gas to consumers. The electric utility industry surveys are the Form EIA-759 filed by all generating electric utilities and the Form FERC-423 filed by fossil fueled plants. Responses to these four monthly surveys are mandatory.

A description of the survey respondents, reporting requirements, and processing and editing of the data is given on the following pages for each of the surveys.

#### **Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition"**

##### *Survey Design*

The original version of Form EIA-176 was approved in 1980 with a mandatory response requirement. Prior to 1980, published data were based on voluntary responses to Bureau of Mines, U.S. Department of the Interior predecessor Forms BOM-6-1340-A and BOM-6-1341-A of the same title.

In 1982, the scope of the revised EIA-176 survey was expanded to collect the number of electric utility consumers in each State, volumes of gas transported to industrial and electric utility consumers, detailed information on volumes transported across State borders by the respondent for others and for the responding company, and detailed information on other disposition. These changes were incorporated to provide more complete survey information with a minimal change in respondent burden. The 1982 version of the Form EIA-176 continues to be the basis for the current version of this form.

In 1988, the Form EIA-176 was revised to include data collection for deliveries of natural gas to commercial and industrial consumers for the account of others. A short version of Form EIA-176 was also approved in 1988. Companies engaged in purchase and delivery activities but not in transportation and storage activities may file the short form. Usually, these companies are municipals handling small volumes of gas.

In 1990, the Form EIA-176 was revised to include more detailed information for gas withdrawn from storage facilities, gas added to storage facilities, deliveries of company-owned natural gas and natural gas transported for the account of others. The revised form was approved for use beginning with report year 1990.

Upon the Office of Management and Budget's approval in 1993, the Form EIA-176 was again revised. All deliveries to consumers are now categorized as firm or interruptible. Commercial and industrial consumers are further categorized as nonutility power producers or as those excluding nonutility power producers.

Data reported on this form are no longer considered proprietary. Response to the form continues to be mandatory.

### ***Survey Universe and Response Statistics***

The Form EIA-176 is mailed to all identified interstate and intrastate natural gas pipeline companies, investor and municipally owned natural gas distributors, underground natural gas storage operators, synthetic natural gas plant operators, and field, well, or processing plant operators that deliver natural gas directly to consumers (including their own industrial facilities) and/or that transport gas to, across, or from a State border through field or gathering facilities.

Each company and its parent company or subsidiaries were required to file if they met the survey specifications. The original mailing in 1996 for report year 1995 totaled 1,991 questionnaire packages. To this original mailing, 11 names were added and 61 were deleted as a result of the survey processing. Additions were the result of comparisons of the mailing list to other survey mailing lists. Deletions resulted from post office returns and determinations that companies were out of business, sold, or not within the scope of the survey. After all updates, the survey universe was 1,941 responses from approximately 1,800 companies.

Following the original mailing, second request mailing, and nonrespondents followup, 1,911 responses were entered into the data base, and there were 30 nonrespondents.

### ***Summary of Form EIA-176 Data Reporting Requirements***

The EIA-176 is a multiline schedule for reporting all supplies of natural gas and supplemental gaseous fuels

and their disposition within the State indicated. Respondents file completed forms with EIA in Washington, DC. Data for the report year are due by April 1 of the following year. Extensions of the filing deadline for up to 45 days are granted to any respondent on request.

All natural gas and supplemental gaseous fuels volumes are reported on a physical custody basis in thousand cubic feet (Mcf), and dollar values are reported to the nearest whole dollar. All volumes are reported at 14.73 pounds per square inch absolute pressure (psia) and 60 degrees Fahrenheit.

### ***Routine Form EIA-176 Edit Checks***

A series of manual and computerized edit checks are used to screen the Form EIA-176. The edits performed include validity, arithmetic, and analytical checks.

The incoming forms are reviewed prior to keying. This prescan determines if the respondent identification (ID) number and the company name and address are correct, if the data on the form appear complete and reasonable, and if the certifying information is complete.

Manual checks on the data are also made. Each form is prescanned to determine that data were reported on the correct lines. The flow of gas through interstate pipelines is checked at the company level to ensure that each delivery from a State is matched with a corresponding receipt in an adjoining State.

After the data are keyed, computer edit procedures are performed. Edit programs verify the report year, State code, and arithmetic totals. Further tests are made to ensure that all necessary data elements are present and that the data are reasonable and internally consistent. The computerized edit system produces error listings with messages for each failed edit test. When problems occur, respondents are contacted by telephone and required to file amended forms with corrected data.

### ***Other EIA Publications Referencing Form EIA-176***

Data from Form EIA-176 are also published in the *Natural Gas Annual*.

## **Form EIA-895, "Monthly Quantity of Natural Gas Report"**

### ***Survey Design***

In 1996, an annual schedule was added to the Form EIA-895 to replace the Form EIA-627. Data collection on the Form EIA-895 began in January 1995. This form was designed to replace the Interstate Oil and Gas Compact Commission (IOGCC) form, "Monthly Report of Natural Gas Production." In 1994, the IOGCC decided to discontinue collection of their form. All gas producing States are requested to report on the Form EIA-895; a voluntary report. Data are reported by State agencies. The form was designed to provide a standard reporting system, to the extent possible, for the natural gas data reported by the States. Data are not considered proprietary.

Beginning with 1980, natural gas production data previously obtained on an informal basis from State conservation agencies were collected on Form EIA-627. This form was designed by EIA to collect annual natural gas production data from the appropriate State agencies under a standard data reporting system within the limits imposed by the diversity of data collection systems of the various producing States. The form was redesigned in 1990 to collect monthly breakdowns of all annual data elements. Data are not considered proprietary. It was also designed to avoid duplication of effort in collecting production and value data by producing States and to avoid an unnecessary respondent burden on gas and oil well operators. In 1993, value and associated volume of marketed production by month was added to the EIA-627. In 1996, the Form EIA-627 was discontinued. The information is collected on an annual schedule on the Form EIA-895.

### ***Survey Universe and Response Statistics***

Form EIA-895 is mailed to energy or conservation agencies in all 33 natural gas producing States. All producing States participate voluntarily in the EIA-895 survey by filing the completed form or by responding to telephone contacts.

Reports on State production are due 20 days after the end of the report month. (In most cases, the data are not available to the States until after this time period.

Therefore, States are requested to send the report within 80 days after the end of the report month.) The annual schedule of the Form EIA-895 is due with the December data report.

### ***Summary of Data Requirements***

The Form EIA-895 monthly schedule consists of nine questions on one page, and requires volumetric information on gross production (gas and oil wells individually), gas used for repressuring, gas vented and flared, nonhydrocarbon gases removed, natural gas used as fuel on leases, marketed production, value based marketed production and the value in dollar amount of the marketed production.

Form EIA-895 annual schedule collects data on the monthly and annual production volume of natural gas (including gross withdrawals from both gas and oil wells); volumes returned to formation for repressuring, pressure maintenance, and cycling; quantities vented and flared; quantities of nonhydrocarbon gases removed; quantities of fuel used on leases; marketed production; the value of marketed production; and the number of producing gas wells.

Respondents are asked to report all volumes in thousand cubic feet at the State's standard pressure base and at 60 degrees Fahrenheit. All dollar values are reported in thousands.

### ***Routine Form EIA-895 Edit Checks***

Each filing of Form EIA-895 is manually checked for reasonableness and mathematical accuracy. Information on the forms is compared to totals of monthly data reported. Volumes are converted, as necessary, to a standard 14.73 psia pressure base. Reasonableness of data is assessed by comparing reported data to the previous year's data. State agencies are contacted by telephone to correct errors. Amended filings or resubmissions are not a requirement, since participation in the survey is voluntary.

### ***Other EIA Publications Referencing Form EIA-895***

Data from Form EIA-895 are also published in the EIA publication, *Natural Gas Annual*.

## **EIA-191 Survey, "Underground Natural Gas Storage Report"**

### ***Survey Design***

The Form EIA-191, "Underground Natural Gas Storage Report," was revised effective January 1994. Among the changes from the form used from 1991 through 1993 are a distinction between a monthly and annual survey. Prior to 1991, data on the storage of natural gas were collected on a survey jointly implemented in 1975 by the Federal Power Commission (FPC), the Federal Energy Administration (FEA), and the Bureau of Mines (BOM) as the FPC-8/ FEA-G-318 system. The data received on both the FPC-8 and FEA-G-318 were computerized and aggregated by FPC. The form was previously revised in 1991 to include storage data by State, field, and reservoir.

At the beginning of 1979, the EIA assumed responsibility for the collection, processing, and publication of the data gathered in the survey. Form FEA-G-318 was renewed on July 1, 1979, as Form EIA-191 and the survey was retitled the FPC-8/EIA-191 Survey (Figure D4 shows the EIA-191). Form FPC-8 was renewed in December 1985 and the survey retitled FERC-8/EIA-191 Survey. The forms were not merged because of FERC's stated desire to maintain the separate identity of the FERC-8 for administrative reasons. In September 1995, the FERC discontinued the reporting requirements of Form FERC-8. FERC jurisdictional firms will continue to file Form EIA-191.

### ***Survey Universe and Response Statistics***

The 103 companies that operate underground facilities will file the Form EIA-191. Of these companies, 42 are subject to the jurisdiction of FERC and are required to report data on Form EIA-191.

The response rate as of the filing deadline is approximately 20 percent. Data from the remaining 80 percent of respondents are received in writing and/or by telephone within 3 to 4 days after the filing deadline. All data supplied by telephone are subsequently filed in writing, generally within 15 days of the filing deadline. The final response rate is 100 percent.

### ***Summary of EIA-191 Data Reporting Requirements***

The EIA-191 monthly schedule contains current month and prior month's data on the total quantities of gas in storage, injections and withdrawals, the location (including State and county, field, reservoir) and peak day withdrawals during the reporting period. Prior month's data are required only when data are revised.

Information on co-owners of storage fields has been eliminated. The annual schedule contains type of facility, storage field capacity, maximum deliverability and pipelines to which each field is connected. The annual schedule is filed with the January submission.

Collection of the survey is on a custody basis. Information requested must be provided within 20 days after the first day of each month. Twelve reports are required per calendar year. Respondents are required to indicate whether the data reported are actual or estimated. For most of the estimated filings, the actual data or necessary revisions are reflected in the prior month section of the monthly form. Actual data on natural gas injections and withdrawals from underground storage are based on metered quantities. Data on quantities of gas in storage and on storage capacity represent, in part, reservoir engineering evaluations. All volumes are reported at 14.73 psia and 60 degrees Fahrenheit.

### ***Routine Form EIA-191 Edit Checks***

Data received on Form EIA-191 are entered into the survey processing system. The survey's five principal data elements (total, base, working gas in storage, injections, and withdrawals) receive a preliminary visual edit to eliminate and correct obvious errors or omissions. Respondents are required to refile reports containing any inconsistencies or errors.

### ***Other EIA Publications Referencing Form EIA-191***

The EIA publication *Monthly Energy Review* and *Winter Fuels Report* contain data from the EIA-191 survey.

## **"Quarterly Natural Gas Import and Export Sales and Price Report"**

### ***Survey Design***

The collection of data covering natural gas imports and exports was begun in 1973 by the Federal Power Commission (FPC). On October 1977, FPC ceased to exist and its data collection functions were transferred to the Federal Energy Regulatory Commission (FERC) within the Department of Energy (DOE). From 1979 to 1994, the Energy Information Administration (EIA) has had the responsibility for collecting Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." Data are not considered proprietary. The Form FPC-14 was discontinued in 1995.

Beginning in 1995, import and export data are taken from the "Quarterly Natural Gas Import and Export Sales and Price Report." This report is prepared by the Office of Fossil Energy, U.S. Department of Energy, based on information submitted by all firms having authorization to import or export natural gas.

### ***Survey Universe and Response Statistics***

All companies are required, as a condition of their authorizations to import or export natural gas, to file quarterly reports with the Office of Fossil Energy. These data are collected as part of its regulatory responsibilities. The data are reported at a monthly level of detail. Data reported on the Form FPC-14 represented physical movements of natural gas. Data collected by the Office of Fossil Energy are reported on an equity (sales) basis. For 1994 and earlier years, comparisons of the data from the two sources may show differences because reporting requirements were different.

Prior to 1995, the Form FPC-14 was filed annually by each organization or individual having authority to import and export natural gas regardless of whether any activity took place during the reporting year. Authorizations to import and export was originally granted by the FPC. In 1977, the authority to grant authorizations transferred to the Economic Regulatory Administration (ERA). It now resides with the Office of Fossil Energy, U.S. Department of Energy.

### ***Routine Edit Checks***

Respondents are required to certify the accuracy of all data reported. The data are checked for reasonableness and accuracy. If errors are found, the companies are required to file corrected data. The data are compared with data reported by the National Energy Board of Canada and are published quarterly. All natural gas volumes in this report are expressed at a pressure base of 14.73 pounds per square inch absolute and temperature of 60 degrees Fahrenheit, except as noted. All import and export prices are in U.S. dollars and, except for LNG exports, are those paid at the U.S. border. LNG export prices are those paid at the point of sale and delivery in Yokohama, Japan.

## **Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"**

### ***Survey Design***

The original Form EIA-857 was approved for use in December 1984. Response to the Form EIA-857 is mandatory on a monthly basis. Data collected on the Form EIA-857 cover the 50 States and the District of Columbia and include both price and volume data. Data are considered proprietary.

### ***Survey Universe and Response Statistics***

A sample of 382 natural gas companies, including interstate pipelines, intrastate pipelines, and local distribution companies, report to the survey. The sample was selected independently for each of the 50 States and the District of Columbia from a frame consisting of all respondents to Form EIA-176 who reported deliveries of natural gas to consumers in the residential, commercial, or industrial sectors. Each selected company is required to complete and file the Form EIA-857 on a monthly basis. Initial response statistics on a monthly basis are as follows: responses received by due date, approximately 50 percent, and responses received after follow-up, 100 percent. Virtually all are received in time for incorporation in the current month's processing cycle. When a response is extremely late, and the company represents less than 25 percent of the natural gas volumes delivered by all sampled companies in the State, values are imputed as described in Appendix C. When the company's submission is eventually received, the submitted data are used for future processing and revisions.

The Form EIA-857 is a monthly sample survey of firms delivering natural gas to consumers. It provides data that are used to estimate monthly sales of natural gas (volume and price) by State and monthly deliveries of natural gas on behalf of others (volume) by State to three consumer sectors - residential, commercial, and industrial. (Monthly deliveries and prices of natural gas to electric utilities are reported on the Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," and the Form EIA-759, "Monthly Power Plant Report.") See Appendix C for a discussion of the sample design and estimation procedures.



### ***Summary of Form EIA-857 Data Reporting Requirements***

Data collected monthly on the Form EIA-857 on a State level include the volume and cost of purchased gas, the volume and cost of natural gas consumed by sector (residential, commercial, and industrial), and the average heat content of all gas consumed. Respondents file completed forms with EIA in Washington, DC on or before the 30th day after the end of the report month.

All natural gas volumes are reported in thousand cubic feet at 14.73 psia at 60 degrees Fahrenheit and dollar values are reported to the nearest whole dollar.

### ***Routine Form EIA-857 Edit Checks***

A series of manual and computerized edit checks are used to screen the Form EIA-857. The edits performed include validity and analytical checks.

## Appendix C

### Statistical Considerations

The monthly sales (volume and price) and monthly deliveries (volume) of natural gas to residential, commercial and industrial consumers presented in this report by State are estimated from data reported on the Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers." (See Appendix B for a description of this Form.) These estimations must be made from the reported data since the Form EIA-857 is a sample survey. A description of the sample design and the estimation procedures is given below.

#### Sample Design

The Form EIA-857 is a monthly sample survey of companies delivering natural gas to consumers. It includes inter- and intrastate companies, and producers, as well as local distribution companies. The survey provides data that are used each month to estimate the volume of natural gas delivered and the price for onsystem sales of natural gas by State to three consumer sectors--residential, commercial, and industrial. Monthly deliveries and prices of natural gas to electric utilities are reported on the Form EIA-759, "Monthly Power Plant Report," and the Form FERC-423, "Monthly Report of Costs and Quality of Fuels for Electric Plants."

**Sample Universe.** The sample currently in use was selected from a universe of 1,538 companies. These companies were respondents to the Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition," for reporting year 1995 who reported sales or deliveries to consumers in the residential, commercial or industrial sectors. (See Appendix B for a description of the Form EIA-176.)

**Sampling Plan.** The goal was a sample that would provide estimates of monthly natural gas consumption by the three consuming sectors within each State and the District of Columbia. A stratified sample using a single stage and systematic selection with probability

proportional to size was designed. The measure of size was the volume of natural gas physically delivered in the State to the three consuming sectors by the company in 1995. There were two strata--companies selected with certainty and companies selected under the systematic probability proportional to size design.

Initial calculations showed that a 25 percent sample of companies would yield reasonably accurate estimates. The sample was selected independently in each State, resulting in a national total of 387 respondent companies. Unlike previous years, no mergers or acquisitions were uncovered as a result of the initial mail-out. Therefore there was no need for either substitution of respondent companies or a reduction in the total number of respondents.

**Certainty Stratum.** Since estimates were needed for each of the 50 States and the District of Columbia, the strata were established independently within each State. In 16 States and the District of Columbia where sampling was not feasible due to small numbers of companies and/or small volumes of gas deliveries, all companies were selected. The 16 States were: Alaska, Connecticut, Delaware, Hawaii, Idaho, Maine, North Dakota, New Hampshire, New Jersey, Nevada, Oregon, Rhode Island, South Dakota, Utah, Vermont, and Washington.

For each of the remaining States, the total volumes of industrial sales and deliveries and of the combined residential/commercial sales and deliveries were determined. Companies with natural gas deliveries to the industrial sector or to the combined residential/commercial sector above a certain level were selected with certainty. Since a few large companies often account for most of the natural gas delivered within a State, this ensures those companies' inclusion in the sample. The formula for determining certainty was applied independently in the two consumer sectors--the industrial and the combined residential/commercial. These selected companies, together with the companies in the jurisdictions discussed where sampling was not feasible, formed the certainty stratum.

All companies with natural gas deliveries in sector j greater than the cut-off value ( $C_j$ ) were included in the certainty stratum. The formula for  $C_j$  was:

$$C_j = \frac{X_j}{2n} \quad (1)$$

where:

$C_j$  = cutoff value for consumer sector j,

$n$  = target sample size to be selected for the State, 25 percent of the companies in the State,

$X_{ij}$  = the annual volume of natural gas deliveries by company i to customers in consumer sector j,

$X_i$  = the sum within State of annual gas volumes for company i,

$X_j$  = the sum within State of annual gas volumes in consumer sector j,

$X_{..}$  = the sum within State of annual gas volumes in all consumer sectors.

**Noncertainty Stratum.** All other companies formed the noncertainty stratum. They were systematically sampled with probability proportional to size. The measure of size for each company was the total volume of gas sales to all consumer sectors ( $X_i$ ). The number of companies to be selected from the noncertainty stratum was calculated for each State, with a minimum of 2.

The formula for selecting the number of noncertainty stratum companies was:

$$m = n \frac{X_2}{X_{..}} \quad (2)$$

where:

$m$  = the sample size for the noncertainty stratum within a State,

$X_2$  = the sum within State of the  $X_i$  for all companies in the noncertainty stratum.

Companies were listed in ascending order according to their measure of size and then a cumulative measure of size in the stratum was calculated for each company. The cumulative measure of size was the sum of the measures of size for that company and all preceding companies on the list. An interval of width I for selecting the companies systematically was calculated using ( $I = \frac{X_2}{m}$ ). A uniform random number R was selected between zero and I. The first sampled company was

the first company on the list to have a cumulative measure of size greater than R. The second company selected was the first company on the list to have a cumulative measure of size greater than  $R + I$ .  $R + I$  was increased again by I to determine the third company to be selected. This procedure was repeated until the entire sample was drawn.

**Subgroups.** In eight States, the noncertainty stratum was divided into subgroups to ensure that gas in each consumer sector could be estimated. The systematic sample with probability proportional to size design described above was applied independently in each subgroup. The methods for determining the subgroup sample size and calculating the subgroup interval for sample selection were the same as the methods described above for the noncertainty stratum, except that  $X_2$  was the sum within State of the  $X_i$  for only those companies in the subgroup.

These subgroups were defined only for the purpose of sample selection. They are:

California: companies handling only industrial gas and all other companies.

Iowa: companies handling industrial gas and companies delivering only to residential or commercial customers.

Louisiana: companies handling only industrial gas and all other companies, with the latter being further subdivided according to size. The larger group is comprised of all companies with total deliveries of at least 200 million cubic feet while the smaller group consists of companies with less than that volume of delivered gas (three subgroups).

Oklahoma: Companies delivering less than 500 million cubic feet of gas and those delivering more than that volume.

Texas: companies handling only residential/commercial gas, companies handling only industrial gas, and all other companies (three subgroups).

## Estimation Procedures

**Estimates of Volumes.** A ratio estimator is applied to the volumes reported in each State by the sampled companies to estimate the total gas sales and deliveries for the State. Ratio estimators are calculated for each consumer sector—residential, commercial, and industrial—in each State where companies are sampled.

The following annual data are taken from the most recent 1995 submissions of Form EIA-176:

The formula for calculating the ratio estimator ( $E_{vj}$ ) for the volume of gas in consumer sector  $j$  is:

$$E_{vj} = \frac{Y_j}{Y'_{j}} \quad (3)$$

where:

$Y_j$  = the sum within State of annual gas volumes in consumer sector  $j$  for all companies,

$Y'_{j}$  = the sum within State of annual gas volumes in consumer sector  $j$  for those companies in the sample.

The ratio estimator is applied as follows:

$$V_j = y_{j} \times E_{vj} \quad (4)$$

where:

$V_j$  = the State estimate of monthly gas volumes in consumer sector  $j$ ,

$y_{j}$  = the sum within State of reported monthly gas volumes in consumer sector  $j$ .

**Computation of Natural Gas Prices.** The natural gas volumes that are included in the computation of prices represent only those volumes associated with natural gas sales.

The price of natural gas for a State within a sector is calculated as follows:

$$P_j = \frac{R_j}{V'_{j}}$$

where:

$P_j$  = the average price for gas sales within the State in consumer sector  $j$ ,

$R_j$  = the reported revenue from natural gas sales within the State in consumer sector  $j$ ,

$V_j$  = the reported volume of natural gas sales within the State in consumer sector  $j$ .

All average prices are weighted by their corresponding sales volume estimates when national average prices are computed.

The monthly average prices of natural gas are based on sales data only. Volumes of gas delivered for the ac-

count of others to these consumer sectors are not included in the State or national average prices.

Table 28 shows the percent of the total State volume that represents volumes from natural gas sales to the commercial and industrial sectors. This table may be helpful in evaluating commercial and industrial price data. Virtually all natural gas deliveries to the residential sector represent onsystem sales volumes only.

See the section on consumer price calculations in this Appendix for further price information.

**Estimation for Nonrespondents.** A volume for each consumer category is imputed for companies that fail to respond. The imputation is based on the previous month's value reported by the non-responding company and the change from the previous month to the current month in volumes reported by other companies in the State. The imputed volumes are included in the State totals. To estimate prices for non-respondents, the unit price (dollars per thousand cubic feet) reported by the company in the previous month is used.

The formula for imputing volumes of gas sales for nonrespondents was:

$$F_t = F_{t-1} \times \frac{y_{jt}}{y_{jt-1}} \quad (5)$$

where:

$F_t$  = imputed gas volume for current month  $t$ ,

$F_{t-1}$  = gas volume for the company for the previous month,

$y_{jt}$  = gas volume reported by companies in the State stratum for report month  $t$ ,

$y_{jt-1}$  = gas volume in the previous month for companies in the State stratum that reported in month  $t$ .

## Final Revisions

**Adjusting Monthly Data to Annual Data.** After the annual data reported on the Form EIA-176 have been submitted, edited, and prepared for publication in the *Natural Gas Annual*, revisions are made to monthly data. The revisions are made to the volumes and prices of natural gas delivered to consumers that have appeared in the *Natural Gas Monthly* to match them to the annual values appearing in the *Natural Gas Annual*. The revised monthly estimates allocate the difference between the sum of monthly estimates and the annual reports according to the distribution of the estimated values across the months.

Before the final revisions are made, changes or additions to submitted data received after publication of the monthly estimate and not sufficiently large to require a revision to be published in the *Natural Gas Monthly*, are used to derive an updated estimate of monthly consumption and revenues for each State's residential, commercial, or industrial natural gas consumption.

For each State, two numbers are revised, the estimated consumption and the estimated price per thousand cubic feet.

The formula for revising the estimated consumption is:

$$V_{jm}^* = V_{jm} + \left[ (V_{ja} - V'_{jm}) \left( \frac{V_{jm}}{V'_{jm}} \right) \right] \quad (6)$$

where:

$V_{jm}^*$  = the final volume estimate for month m in consumer sector j,

$V_{jm}$  = the estimated volume for month m in consumer sector j,

$V_{ja}$  = the volume for the year reported on Form EIA-176,

$V'_{jm}$  = The annual sum of estimated monthly volumes.

The price is calculated as described above in the Estimation Procedures section, using the final revised consumption estimate and a revised revenue estimate.

The formula for revising the estimated revenue is:

$$R_{jm}^* = R_{jm} + \left[ (R_{ja} - R'_{jm}) \left( \frac{R_{jm}}{R'_{jm}} \right) \right] \quad (7)$$

where:

$R_{jm}^*$  = the final revenue estimate for month m in consumer sector j,

$R_{jm}$  = the estimated revenue for month m in consumer sector j,

$R_{ja}$  = the revenue for the year reported on Form EIA-176,

$R'_{jm}$  = The annual sum of estimated monthly revenues.

Revision of Volumes and Prices for Deliveries to Electric Utilities. Revisions to monthly electric utilities data are published throughout the year as they become available.

## Reliability of Monthly Data

The monthly data published in this report are subject to two sources of error - nonsampling error and sampling error. Nonsampling errors occur in the collection and processing of the data. See the discussion of the Form EIA-857 in Appendix B for a description of nonsampling errors for monthly data.

Sampling error may be defined as the difference between the results obtained from a sample and the results that a complete enumeration would provide. The standard error statistic is a measurement of sampling error.

**Standard Errors.** A standard error of an estimate is a statistical measure that indicates how the estimate from the sample compares to the result from a complete enumeration. Standard errors are calculated based on statistical theory that refers to all possible samples of the same size and design.

The standard errors for monthly natural gas volume estimates by State are given in Table C1. Ninety-five percent of the time, the volume that would have been obtained from a complete enumeration will lie in the range between the estimated volume minus two standard errors and the estimated volume plus two standard errors.

The standard error of the natural gas volume estimate is the square root of the variance of the estimate. The formula for calculating the variance of the volume estimate is:

$$V(\hat{Y}) = \sum_{h=1}^H \left[ N_h^2 \frac{(1 - \frac{n_h}{N_h})}{n_h(n_h - 1)} \left( \sum_{i=1}^{n_h} (y_i - T x_i)^2 \right) \right] \quad (8)$$

where:

$H$  = the total number of strata

$N_h$  = the total number of companies in stratum h

$n_h$  = the sample size in stratum h

$y_i$  = the reported monthly volume for company i

$x_i$  = the reported annual volume for company i

$T$  = the ratio of the sum of the reported monthly volumes for sample companies to the sum of the reported annual volumes for the sample companies.

**Table C-1. Standard Error for Natural Gas Deliveries and Price to Consumers by State, September 1997**

State	Volume Million Cubic Feet				Price Dollars per Thousand Cubic Feet		
	Residential	Commercial	Industrial	Total	Residential	Commercial	Industrial
Alabama .....	154	824	504	978	0.32	2.36	1.06
Alaska .....	0	0	0	0	—	—	—
Arizona .....	20	117	0	119	0.13	0.12	—
Arkansas .....	0	0	0	0	—	—	—
California .....	242	109	713	761	0.03	0.01	0.06
Colorado .....	NA	NA	NA	NA	NA	NA	NA
Connecticut .....	0	0	0	0	—	—	—
Delaware .....	0	0	0	0	—	—	—
District of Columbia .....	0	0	0	0	—	—	—
Florida .....	225	207	NA	NA	2.04	0.23	NA
Georgia .....	497	1,932	547	2,068	1.69	5.38	9.74
Hawaii .....	0	0	0	0	—	—	—
Idaho .....	NA	NA	NA	NA	NA	NA	NA
Illinois .....	1,189	933	528	1,601	1.45	3.07	0.32
Indiana .....	348	296	1,222	1,305	1.03	0.25	0.25
Iowa .....	129	31	502	519	0.91	0.09	0.77
Kansas .....	468	385	3,321	3,375	1.66	1.09	4.08
Kentucky .....	55	28	471	475	0.10	0.30	1.46
Louisiana .....	29	29	NA	NA	0.29	0.35	NA
Maine .....	0	0	0	0	—	—	—
Maryland .....	2	6	14	15	0.02	0.02	0.26
Massachusetts .....	265	1,357	6,957	7,093	0.69	0.31	0.41
Michigan .....	1,699	1,037	3,895	4,374	0.63	0.50	0.98
Minnesota .....	136	405	852	953	0.43	0.49	0.21
Mississippi .....	NA	NA	NA	NA	NA	NA	NA
Missouri .....	131	91	226	276	0.52	0.29	0.41
Montana .....	0	3	0	3	0.01	0.01	—
Nebraska .....	14	81	73	110	0.46	0.02	0.55
Nevada .....	0	0	0	0	—	—	—
New Hampshire .....	NA	NA	NA	NA	NA	NA	NA
New Jersey .....	0	0	0	0	—	—	—
New Mexico .....	113	273	709	768	0.85	0.29	—
New York .....	NA	NA	0	NA	NA	NA	—
North Carolina .....	26	27	423	425	0.24	0.02	0.23
North Dakota .....	0	0	0	0	—	—	—
Ohio .....	0	0	0	0	—	—	—
Oklahoma .....	75	2,603	1,164	2,853	0.35	5.65	0.21
Oregon .....	0	0	0	0	—	—	—
Pennsylvania .....	165	970	2,217	2,425	0.28	0.55	4.32
Rhode Island .....	0	0	0	0	—	—	—
South Carolina .....	20	428	190	469	0.62	0.48	0.06
South Dakota .....	0	0	0	0	—	—	—
Tennessee .....	67	45	2,583	2,585	0.61	0.14	0.40
Texas .....	291	2,465	NA	NA	0.20	0.27	NA
Utah .....	0	0	0	0	—	—	—
Vermont .....	0	0	0	0	—	—	—
Virginia .....	322	163	956	1,021	1.37	0.12	0.57
Washington .....	NA	NA	NA	NA	NA	NA	NA
West Virginia .....	387	265	65	473	1.43	1.77	0.48
Wisconsin .....	295	138	648	725	0.25	0.41	1.20
Wyoming .....	29	NA	NA	NA	0.59	NA	NA
<b>Total .....</b>	<b>2,632</b>	<b>4,857</b>	<b>12,121</b>	<b>13,320</b>	<b>0.12</b>	<b>0.15</b>	<b>0.34</b>

NA = Not Available.

— = Not Applicable.

Source: Energy Information Administration, Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

## Appendix D

### Natural Gas Reports and Feature Articles

#### ***Reports Dealing Principally with Natural Gas and/or Natural Gas Liquids***

- *Natural Gas Annual 1995*, DOE/EIA-0131(95), November 1996.
- *Natural Gas Annual 1993 Supplement: Company Profiles*, DOE/EIA-0131(93/S), February 1995.

#### ***Other Reports Covering Natural Gas, Natural Gas Liquids, and Other Energy Sources***

- *Monthly Energy Review*, DOE/EIA-0035. Published monthly. Provides national aggregate data for natural gas, natural gas liquids, and other energy sources.
- *Short-Term Energy Outlook*, DOE/EIA-0202. Published quarterly. Provides forecasts for next six quarters for natural gas and other energy sources.
- *Natural Gas 1995: Issues and Trends*, DOE/EIA-0560(95), November 1995.
- *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves - 1995 Annual Report*, DOE/EIA-0216(95)/Advance Summary, October 1996.
- *Annual Energy Review 1995*, DOE/ EIA-0384(95), July 1996. Published annually.
- *Annual Report to Congress 1995 DOE/ EIA-01733(95)*, July 1996. Published annually.
- *Annual Energy Outlook 1996*, DOE/ EIA-0383(96), January 1996. Published annually.

#### ***Selected One-Time Natural Gas and Related Reports***

- *The Value of Underground Storage in Today's Natural Gas Industry*, DOE/EIA-0591, March 1995.
- *Natural Gas Productive Capacity for the Lower 48 States, 1980 through 1995*, DOE/EIA-0542(95), July 1994.
- *Largest U.S. Oil and Gas Fields*, DOE/EIA-TR-0567, August 1993.
- *Energy Policy Act Transportation Rate Study*, DOE/EIA-0571, October 1993.
- *Energy Policy Act Transportation Study: Interim Report of Natural Gas Flows and Rates*, DOE/EIA-0602, October 1995.

#### ***Selected and Recurring Natural Gas and Related Data Reference Reports***

- *Directory of Energy Data Collection Forms*, DOE/EIA-0249(95), January 1996.
- *Oil and Gas Field Code Master List, 1995*, EIA-0370(95), December 1996.

## Feature Articles

### *January 1994*

#### **U.S. Coalbed Methane Production**

(Updates the Energy Information Administration's coalbed methane production information through 1992 and presents it by geologic basin and by State.)

### *February 1994*

#### **Contracting for Natural Gas Supplies**

(Addresses the contractual relationships of producers with end users and distributors for the natural gas that is shipped along the interstate pipeline systems.)

### *May 1994*

#### **Opportunities with Fuel Cells**

(Discusses the uses of fuel cells in today's market.)

#### **Revisions to Monthly Natural Gas Data**

(Discusses the revision errors for natural gas data.)

### *June 1994*

#### **Natural Gas 1994: Issues and Trends - Executive Summary**

(Provides an overview of the natural gas industry in 1993 focusing on trends in production, consumption, and pricing of natural gas.)

### *August 1994*

#### **U.S. Natural Gas Imports and Exports - 1993**

(Contains final 1993 data on all U.S. imports and exports of natural gas.)

### *March 1995*

#### **The Comparability of Resource and Reserve Data for Crude Oil, Natural Gas, Coal, and Uranium**

(Clarifies which terms are equivalent among the four major energy minerals in the United States.)

### *July 1995*

#### **Revisions to Monthly Natural Gas Data**

(Discusses the revision errors for natural gas data.)

### *June 1996*

#### **Natural Gas Industry Restructuring and Data Collection**

(Discusses how restructuring of the natural gas industry has impacted the natural gas data collection efforts.)

### *July 1996*

#### **Revisions to Monthly Natural Gas Data**

(Discusses the revision errors for natural gas data.)

### *November 1996*

#### **U.S. Natural Gas Imports and Exports - 1995**

(Contains final 1995 data on all U.S. imports and exports of natural gas.)

### *December 1996*

#### **Crosswell Seismology -- A View from Aside**

(Discusses crosswell seismology and its geologic and economic implications for the domestic oil and gas industry.)

### *May 1997*

#### **Restructuring Energy Industries: Lessons from Natural Gas**

(Compares and contrasts the natural gas and electric power industries.)

### *July 1997*

#### **Intricate Puzzle of Oil and Gas "Reserves Growth"**

(Discusses the factors that affect ultimate recovery estimates of a field or reservoir.)



## *August 1997*

### **Natural gas Residential Pricing Developments During the 1996-97 Winter**

(Discusses key factors that affect pricing patterns, highlights the effects of weather, utilization patterns of natural gas storage, and pricing mechanisms used in natural gas markets.)

## **Special Focuses**

### *January 1997*

#### **Natural Gas Productive Capacity**

(Analyzes monthly natural gas wellhead productive capacity in the lower 48 States from 1985 and 1996 and project this capacity for 1996 and 1997.)

#### **Outlook for Natural Gas Through 2015**

(Presents an outlook for natural gas through 2015)

### *August 1997*

#### **Worldwide Natural Gas Supply and Demand And the Outlook For Global LNG Trade**

(Focuses on natural gas into the next century with emphasis on world natural gas supply and demand to 2015.)

### *September 1997*

#### **Advance Summary: U.S. Crude Oil, Natural Gas, and Natural gas Liquids Reserves, 1996 Annual Report - Advance Summary**

(Focuses on proved reserves of domestic crude oil, natural gas, and natural gas liquids.)

## **Special Reports**

### *March 1997*

#### **Natural Gas Analysis and Geographic Information Systems**

(Explores how geographic information system techniques and methodologies are being used by the Energy Information Administration.)

### *April 1997*

#### **Natural Gas Pipeline and System Expansions**

(Examines recent expansions to the North American natural gas pipeline network.)

### *July 1997*

#### **Revisions to Monthly Natural Gas Data**

(Discusses the revision errors for natural gas data.)

#### **Natural Gas 1996: Highlights**

(Reviews data for 1996 based on Energy Information Administration surveys.)

### *August 1997*

#### **U.S. Natural gas Imports and Exports - 1996**

(Contains final 1996 data on all U.S. imports and exports of natural gas.)

### *September 1997*

#### **U.S. Underground Storage of Natural Gas in 1997: Existing and Proposed**

(Examines recent and proposed expansions of underground natural gas storage capacity and deliverability in the United States as of September 1, 1997.)

## Appendix E

### Technical Contacts

Section	Tables		Principal Data Sources	Technical Contact
Summary Statistics: Natural Gas Production	1, 2, 3	Monthly: Annual:	EIA-895, "Monthly Quantity of Natural Gas Report"	Audrey E. J. Corley (202) 586-4804
		Monthly:	Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"	Roy Kass (202) 586-4790
Extraction Loss	1	Monthly: Annual:	EIA computations Form EIA-816, "Monthly Natural Gas Liquids Report" and Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production"	Margo Natof (202) 586-6303
Supplemental Gaseous Fuels	2	Monthly: Annual:	EIA computations Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition"	Audrey E. J. Corley (202) 586-4804 Margo Natof (202) 586-6303
Imports and Exports	2	Monthly: Annual:	EIA computations Office of Fossil Energy, U.S. Department of Energy, "Natural Gas Import and Exports"	Norman Crabtree (202) 586-6180
Price: City Gate, Residential, Commercial, and Industrial	4	Monthly:	Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers"	Roy Kass (202) 586-4790
Wellhead	4	Monthly: Annual:	EIA computations Form EIA-895, "Monthly Quantity and Value of Natural Gas Report"	Linda Cook (202) 586-6306
Electric Utility	4	Monthly:	Form FPC-423, "Cost and Quality of Fuels for Electric Power Plants"	Roy Kass (202) 586-4790
Summary of Natural Gas Imports and Exports	5,6	Monthly:	Quarterly Natural Gas Import and and Export Sales and Price Report	Norman Crabtree (202) 586-6180
Producer Related Activities: Natural Gas Production	7,8	Monthly:	EIA-895, "Monthly Quantity of Natural Gas Report"	Audrey Corley (202) 586-4804

Underground Storage:	9, 10, 11 12, 13	Monthly:	Forms FERC-8 and EIA-191, "Underground Gas Storage Report"	Roy Kass (202) 586-4790
Distribution and Consumption:				
Deliveries to:				
Residential,	14	Monthly:	Form EIA-857, "Monthly Report of	Roy Kass
Commercial,	15		Natural Gas Purchases and Deliveries	(202) 586-4790
Industrial,	16		to Consumers"	
Electric Utility,	17		Form FERC-423, "Cost and Quality	
All Consumers	18		of Fuels for Electric Power Plants"	
Average Price to:				
City Gate,	19	Monthly:	Form EIA-857, "Monthly Report of	Roy Kass
Residential,	20		Natural Gas Purchases and Deliveries	(202) 586-4790
Commercial,	21		to Consumers"	
Industrial,	22		Form FERC-423, "Cost and Quality	
Electric Utility	23		of Fuels for Electric Power Plants"	
Onsystem Sales	24	Monthly:	Form EIA-857, "Monthly Report of	Roy Kass
			Natural Gas Purchases and Deliveries	(202) 586-4790
			to Consumers"	
Heating Degree Days	25	Seasonal:	National Oceanic and Atmospheric	James Keeling
			Administration	(202) 586-6107
Highlights				
				Mary Carlson
				(202) 586-4749

## Appendix F

### Natural Gas Electronic Products

In addition to printed publications, the Energy Information Administration distributes information concerning the natural gas industry in a variety of electronic formats through several media. Two main types of products are available electronically: *viewable documents* that may be read or printed; and *post-processable files* that may be directly used as input to a computer application without additional keying and checking of data.

Viewable documents represent complete or selected sections of publications including text, tables and graphs. They may be as specific as single tables or as general as an entire publication. Post-processable documents on the other hand are either macro-level representations of

information in published tables or micro-level respondent information representing responses on a specific nonconfidential survey.

The media used to distribute these electronic publications include: (1) The Energy Information Administration's Internet site (<http://www.eia.doe.gov> or <ftp://ftp.eia.doe.gov>); (2) Dial-in access through the Energy Information Administration's EPUB electronic bulletin board or through the Economic Bulletin Board of the Department of Commerce and the COGIS system; (3) The Energy Information Administration's quarterly CD-ROM(Info-Disk); (4) The Energy Information Administration's Fax on Demand System; and (5) diskettes.

	Internet	Dial-In	InfoDisk	Fax	Diskette
ANNUAL PUBLICATIONS					
Natural Gas Annual, Volume 1, 1994 Provides information on supply, and disposition of natural gas in the United States. Information is provided nationally, regionally, and by State for 1994.	V P		V P		P
Natural Gas Annual, Volume 2, 1994 Contains historical information about supply and disposition of natural gas at the national, regional, and State level as well as prices at selected points in the flow of gas from wellhead to burnertip.	P		P		P
Natural Gas 1995: Issues and Trends Addresses current issues affecting the natural gas industry and markets, and analyzes trends in the most recent natural gas data.	V		V		
Natural Gas 1994: Issues and Trends Provides an overview of the natural gas industry in 1993 and early 1994, focusing on the overall ability to deliver gas under the new regulatory mandates of the Federal Energy Regulatory Commission's Order 636.	V		V		
Oil and Gas Products List 1994-1995 Brief descriptions of the various information products prepared by the Office of Oil and Gas.	V		V		
U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves Annual Report 1994 1994 national and State estimates of reserves, reserve changes, and production, plus industry highlights.	V		V		
MONTHLY PUBLICATIONS					
Natural Gas Monthly, from September 1995 forward. Entire Publication in viewable format	V		V		

V=Viewable

P=Post-Processable

	Internet	Dial-In	InfoDisk	Fax	Diskette
OTHER PUBLICATIONS					
Natural Gas 1995: Preliminary Highlights This Special Focus, which was featured in the April 1996 issue of the <i>Natural Gas Monthly</i> , presents events that affected the natural gas industry during 1995.	V	P		V	
Energy Policy Act Transportation Study: Interim Report on Natural Gas Flow and Rates (EPACT) Analysis of natural gas transportation rates and distribution patterns for the period from 1988 through 1994.	V		V		
Oil Production Capacity Expansion Cost for the Persian Gulf Quantifies the cost of expanding oil production capacity for the Persian Gulf based on geologic plays and fields rather than country-level economics. Development costs and volumes are estimated for the next 15 years.	V		V		
Costs and Indices for Domestic Oil and Gas Field Equipment and Production Operations 1990-1993 Cost of equipment and operation of oil and gas wells in the lower 48 States.	V		V		
Drilling Sideways- A Review of Horizontal Well Technology and the Domestic Application April 1993 report presenting salient aspects of current and near-future horizontal drilling and completion technology.	V		V		
International Oil and Gas Exploration and Development Compilation of country-level data and assessment of regional trends relating to upstream aspects of global oil and gas supply.	V		V		
Natural Gas Productive Capacity for the Lower 48 States 1984-1996 Analysis of monthly natural gas wellhead productive capacity.	V		V		
Natural Gas Productive Capacity for the Lower 48 States 1980-1995 Analysis of monthly natural gas wellhead productive capacity.	V		V		
Oil and Gas Field Code Master List Comprehensive listing of U.S. oil and gas field names as of November 1995.	V		V		
Oil and Gas Resources of the Fergana Basin (Uzbekistan, Tadzhikistan, and Kyrgyzstan) Reservoir level assessments of oil and gas ultimate recovery in the former Soviet Union area.	V		V		
The Value of Underground Storage in Today's Natural Gas Industry Explores the significant and changing role of storage in the industry.	V		V		
U.S. Oil and Gas Development in the Early 1990's Analyses of the growing prominence of smaller energy companies in U.S. oil and gas production	V		V		
ANNUAL DATA					
Natural Gas Supply and Disposition, by State 1994	V P	V P		V	

V=Viewable

P=Post-Processable

	Internet	Dial-In	InfoDisk	Fax	Diskette
Natural Gas Summary, United States by Year 1990-1994	V P	V P		V	
1994 Natural Gas Annual Volume 1 data Self-extracting file containing data (in comma-delimited format) that appear in the tables in Volume I of the 1994 <i>Natural Gas Annual</i> .	P		P		P
1994 Natural Gas Annual Volume 2 data Self-extracting file containing historical information (in comma-delimited format) found in the tables in Volume II of the 1994 <i>Natural Gas Annual</i> . Annual historical data at the national level are presented for 1930-1994. Annual information by State and region is presented for 1967-1994.	P		P		P
1993 Data reported on Form EIA-176 A self-extracting compressed file containing data reported on Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition" for 1993.	P				P
1994 Data reported on Form EIA-176 A self-extracting compressed file containing data reported on Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition" for 1994.	P				P
Data archive of historical reserves estimates for U.S. Crude Oil, Natural Gas, and Natural Gas Liquids. National, State, and State subregion data published in the reserves balance tables of <i>U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves</i> from 1977 forward.	P				P
MONTHLY DATA					
Natural Gas Production, United States by Month 1989-forward	P	P		V	
Natural Gas Supply and Disposition, 1989-forward	P	P		V	
Natural Gas Imports and Exports 1989-forward	P	P		V	
Natural Gas Underground Storage: United States Total by Month 1989-forward	P	P		V	
Natural Gas Prices: United States Total by Month 1989-forward	P	P		V	
Natural Gas Consumption by Sector: United States Total by Month, 1989-forward	P	P		V	
SELF-EXTRACTING COMPRESSED DATA FILE ARCHIVES					
Natural Gas Consumption and Prices, for most recent 2-3 years	P	P			
Natural Gas Consumption and Prices, for 1984-1992	P	P			
OTHER REPORTS					
Natural Gas Weekly Market Update Analysis of current price, supply and storage data along with a two week snapshot of the weather in four distinct metropolitan areas.	V			V	

V=Viewable

P=Post-Processable

# Glossary

**Balancing Item:** Represents the difference between the sum of the components of natural gas supply and the sum of the components of natural gas disposition. These differences may be due to quantities lost or to the effects of data reporting problems. Reporting problems include differences due to the net result of conversions of flow data metered at varying temperature and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycle and calendar period time frames; and imbalances resulting from the merger of data reporting systems which vary in scope, format, definitions, and type of respondents.

**Base (Cushion) Gas:** The volume of gas needed as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the withdrawal season. All native gas is included in the base gas volume.

**British Thermal Unit (Btu):** The heat required to raise the temperature of one pound of water by one degree Fahrenheit at or near 39.2 degrees Fahrenheit.

**City-gate:** A point or measuring station at which a gas distribution company receives gas from a pipeline company or transmission system.

**Commercial Consumption:** Gas used by nonmanufacturing organizations such as hotels, restaurants, retail stores, laundries, and other service enterprises, and gas used by local, State, and Federal agencies engaged in nonmanufacturing activities.

**Depletion:** The loss in service value incurred in connection with the exhaustion of the natural gas reserves in the course of service.

**Depreciation:** The loss in service value not restored by current maintenance, incurred in connection with the consumption or respective retirement of a gas plant in the course of service from causes that are known to be in current operation and against which the utility is not protected by insurance; for example, wear and tear, decay, obsolescence, changes in demand and requirements of public authorities, and the exhaustion of natural resources.

**Dry Natural Gas Production:** Marketed production less extraction loss.

**Electric Utility Consumption:** Gas used as fuel in electric utility plants.

**Exports:** Natural gas deliveries out of the continental United States and Alaska to foreign countries.

**Extraction Loss:** The reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants.

**Flared:** The volume of gas burned in flares on the base site or at gas processing plants.

**Gross Withdrawals:** Full well stream volume, including all natural gas plant liquid and nonhydrocarbon gases, but excluding lease condensate. Also includes amounts delivered as royalty payments or consumed in field operations.

**Imports:** Natural gas received in the Continental United States (including Alaska) from a foreign country.

**Independent Producers:** Any person who is engaged in the production or gathering of natural gas and who sells natural gas in interstate commerce for resale but who is not engaged in the transportation of natural gas (other than gathering) by pipeline in interstate commerce.

**Industrial Consumption:** Natural gas used by manufacturing and mining establishments for heat, power, and chemical feedstock.

**Interstate Companies:** Natural gas pipeline companies subject to FERC jurisdiction.

**Intransit Deliveries:** Redeliveries to a foreign country of foreign gas received for transportation across U.S. territory and deliveries of U.S. gas to a foreign country for transportation across its territory and redelivery to the United States.

**Intransit Receipts:** Receipts of foreign gas for transportation across U.S. territory and redelivery to a foreign country and redeliveries to the United States of U.S. gas transported across foreign territory.

**Intrastate Companies:** Companies not subject to FERC jurisdiction.

**Lease and Plant Fuel:** Natural gas used in well, field, lease operations and as fuel in natural gas processing plants.

**Liquefied Natural Gas (LNG):** Natural gas that has been liquefied by reducing its temperature to minus 260 degrees Fahrenheit at atmospheric pressure.

**Marketed Production:** Gross withdrawals less gas used for repressuring, quantities vented and flared, and nonhydrocarbon gases removed in treating or processing operations. Includes all quantities of gas used in field and processing operations. See Explanatory Note 1 for discussion of coverage of data concerning nonhydrocarbon gases removed.

**Native Gas:** Gas in place at the time that a reservoir was converted to use as an underground storage reservoir as in contrast to injected gas volumes.

**Natural Gas:** A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in the gaseous phase or solution with oil in natural underground reservoirs at reservoir conditions.

**Nonhydrocarbon Gases:** Typical nonhydrocarbon gases that may be present in reservoir natural gas are carbon dioxide, helium, hydrogen sulfide, and nitrogen.

**Onsystem Sales:** Sales to customers where the delivery point is a point on, or directly interconnected with, a transportation, storage, and/or distribution system operated by the reporting company.

**Pipeline Fuel:** Gas consumed in the operation of pipelines, primarily in compressors.

**Repressuring:** The injection of gas into oil or gas formations to effect greater ultimate recovery.

**Residential Consumption:** Gas used in private dwellings, including apartments, for heating, cooking, water heating, and other household uses.

**Storage Additions:** The volume of gas injected or otherwise added to underground natural gas or liquefied natural gas storage during the applicable reporting period.

**Storage Withdrawals:** Total volume of gas withdrawn from underground storage or liquefied natural gas storage during the applicable reporting period.

**Supplemental Gaseous Fuels Supplies:** Synthetic natural gas, propane-air, refinery gas, biomass gas, air injected for stabilization of heating content, and manufactured gas commingled and distributed with natural gas.

**Synthetic Natural Gas (SNG):** A manufactured product chemically similar in most respects to natural gas, that results from the conversion or reforming of petroleum hydrocarbons and may easily be substituted for or interchanged with pipeline quality natural gas.

**Therm:** One-hundred thousand British thermal units.

**Underground Gas Storage Reservoir Capacity:** Interstate company reservoir capacities are those certificated by FERC. Independent producer and intrastate company reservoir capacities are reported as developed capacity.

**Vented Gas:** Gas released into the air on the base site or at processing plants.

**Wellhead Price:** Represents the wellhead sales price, including charges for natural gas plant liquids subsequently removed from the gas, gathering and compression charges, and State production, severance, and/or similar charges.

**Working (Top Storage) Gas:** The volume of gas in an underground storage reservoir above the designed level of the base. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any season.